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ADDRESS
IN DISEASES OF CHILDREN.

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MR. PRESIDENT AND GENTLEMEN:—In obedience to a time-honored custom, and in accordance with a by-law of this Association, I appear before you as Chairman of the Section on Diseases of Children, to note the advances and discoveries of the past year, which, like those in all other branches of scientific investigation, move slowly but steadily forwards; each investigator adding his mite to what was known before. We are here to-day, in this growing and prosperous city, from the North, East, South and West, as guardians of the health and lives of the people. We are assembled together for the purpose of uniting in an honest, earnest endeavor to utilize the knowledge which the advances of the recent past have shed upon the problem of life. We live in an age of progress, characterized by the most effective effort that has ever been put forth to place a proper estimate upon the value of life, to increase its duration, and to elevate humanity to the highest standard of physical, mental and moral grandeur.

The Section on Diseases of Children embraces the largest and most important field connected with the workings of the Association, and should enlist the most earnest attention of every member of the profession. I trust, therefore, that it will not be in vain that I bespeak your indulgence while I enter a plea for the fuller recognition of this branch of our work, and beg your coöperation in the endeavor to secure a safer passage across the tempestuous sea from infancy to childhood, and from childhood to adolescence.

The last year has not been fruitful in advances sufficiently tangible to admit of specification, and yet, perhaps no single year from the foundation of medicine to the present has been so rich in fruitage; so far-reaching in its influence upon both the profession and the laity. No year's work has so indelibly impressed the mind of the profession on the importance of results accomplished—not in this nor that particular branch of medical science, but upon the better and more definite understanding of the great principles underlying the whole superstructure of scientific medicine.

I shall endeavor to bring prominently before the mind of the profession the vast importance of this department, not only to that portion of the human family to be directly benefited by future advances and discoveries, but likewise to point out and emphasize the fact that in the great mortality of children society, the State, the Nation; yea, the world, are all much more largely interested in lessening this fearful mortality, than those who perish in infancy, for they are perhaps the gainers. I need not stop to discuss the fact that the diseases of children have been most sadly, if, indeed, not most culpably neglected, from the earliest records of medicine to the present time, for this is patent to every open eyed physician. There is not a single branch of medicine; nor, indeed, of any of the collateral sciences, which has not, from time to time, been made the subject of more special thought, scientific research, observation and experiment, than have the diseases of children.

It is true that every advance or discovery in scientific medicine has reflected progress on pediatrics, which has been indirectly benefited by the outcome of these improvements. The pages of history are full of instruction in the matter before us. Take, for example, the operation of ovariotomy, which has added in the aggregate so vastly to the span of human existence. Take the last twenty years of its history, so full of incident and interest, and link it with the lives of those most prominently identified with it, and it seems as if destiny herself, in her onward sweep has borne them through evolutions of thought, of science, of human effort and achievement, with a restless and unpausing zeal that has constantly led them forward, from one brilliant success to another, until the advance of abdominal surgery, like the sun at noonday, casts its effulgence from pole to pole and from centre to circumference. The outcome of this important operation has so captivated the minds of the more enterprising and ambitious aspirants for fame and fortune, that pediatrics has, for the time being, been thrown completely in the background.

Our profession, crowned with the marvelous achievements of the past, now looks, with a wistful eye, for investigators worthy of the past and prophetic of the future, as laborers in the field of pediatrics—men who possess the largest combination of successful elements, who are ordained by nature to lead into unexplored regions and dominate new fields of thought which will enable them to solve the problem now pressing for solution, viz.: to lessen this fearful mortality of infantile life. The cradle and the couch can

learn nothing of themselves; therefore we, who have copiously gathered from the experience of the past, must contribute to the advance of the future. When we consider that from one-fourth to one-third of the human family die under five years of age, the victims of disease, it seems truly that their lives are but as the sands upon the shore; their voices are but the evening zephyr, that dallies with the leaf for a moment, and passes away forever.

"'Tis the wink of an eye, the draught of a breath,
From the blossom of health to the paleness of death."

It may be that it was the original purpose of the divine Creator to remove from earth to heaven this large proportion of the human family before they reach the age of responsibility. It may be there is a divine graciousness, an appropriateness, a grandeur, in the circumstance of the death of so many of our race during childhood. However this may be, we who have chosen for our lifework the amelioration of human suffering, cannot accept this dogma, for it neither satisfies the longings of nature nor the demands of the world. We must dive deeper into the mysteries of scientific medicine and prepare to grapple with that dread destroyer that claims so many of earth's little ones. Children typify the kingdom of heaven. They are the embodiment of all that is Godlike in man and beautiful in creation—the mystic link of holiness which unites man with the angels. What language can depict the anguish of a mother, as she lingers over the couch of a stricken child, and earnestly entreats the doctor to rescue her treasure from the ravages of death? Bright hopes and fond anticipations surround the cradle at early morn, the shadows of death gather over it at noon, and in the evening its occupant is a withered flower; the rosy cheek has changed to marble whiteness, "the silver cord is loosed, the golden bowl is broken, and the spirit returns to the God who gave it."

Every meeting of this Association brings us nearer the ark of safety found in preventive medicine, which is now extending its influence over every part of the civilized world, and is based upon the theory which was enunciated by Leeuwenhock in 1662. He discovered that the active principle in the process of fermentation depended upon a living organism; from which he concluded that the *contagium vivum* of all zymotic diseases must also reside in a vegetable parasite. Like discoveries in every other department of scientific investigation (notwithstanding every medical publicist since his time has had some opinion to express upon it), this theory was slow to secure that recognition to which its merits entitled it, being repeatedly forgotten and again revived until it was finally established that there are three distinct forms of parasitic life, viz.: vegetable, animal, and those that lie between the two. The vegetable form are of the nature of algæ or fungi, and are found in air, water, food and soil of all countries and climes. They are found on the highest mountains and in the lowest dells, riding upon the dust, the motes and the insects that float in the sunbeams.

From the day of Leeuwenhock to the present, the great effort of scientists has been to establish the causative relation of these organisms to the diseases in which they are found. This achievement was reserved for the present generation. The labors of Pasteur, Koch, Klein and other famous scientists, by the revelations of the microscope, have established the causative relation of micro-organisms to the infectious diseases of insects, plants, and animals, man included. Pasteur, pushing his investigations still further, has established beyond dispute the fact that the microbes found in the various tissues of the body, in certain infectious diseases of animals, can be carried through a series of culture, until they are completely dissociated from the individual tissue in which they were originally found, and the primary disease be reproduced by inoculation. The microbes which have been produced by this system of cultivation have been proven, under the microscope, to be identical with those found in the tissues of the body both before and after culture; thus proving, beyond question, the causative relation of these organisms to the diseases in which they occur.

These experiments have been made over and over again, with uniform results, in chicken cholera, murrain, splenic fever, etc. The rapidly accumulating evidence in favor of the theory rests upon the experimental researches above referred to, and the great avidity with which the medical mind has seized upon these disclosures is, to *me*, one of the most hopeful signs of advancement. If the germ theory be correct, each of the specific diseases has for its origin a specific parasite, capable of producing the disease in individuals not already protected by a previous attack, vaccination, inoculation or idiosyncrasy. Whenever the conditions requisite to the development of the specific germ of any of the zymotic diseases are fulfilled, whether these conditions depend upon telluric, atmospheric, or some other influence, they must exist. Once in force, the action of the specific poison takes effect on those individuals whose resisting power, either from enfeebled development or disease, is least. In severe epidemics, these influences grow more powerful from day to day, until those whose resisting power is least succumb to the disease. The crowning glory of medicine in the nineteenth century is the effort to perfect the system of sanitary science and to improve the physical and intellectual powers of man. To this end the public health associations, the innumerable county, city and State Boards of Health, as well as the best scientific ability both in and out of the profession, in all parts of the world, are lending their most earnest and zealous efforts.

As a result of these efforts, we find the annual report recently issued by Dr. William Ogle, of the Statistical Department of England, shows a decided diminution, in the last ten years, in the mortality due to the various zymotic diseases. The report shows conclusively that the decline is due to the diminished mortality among children of tender age. It appears from the following extracts that the annual deaths from scarlet fever have fallen from 972 to 716 per million; those from diphtheria from 185 to 121; those from bowel affections from 1,076 to 935. This is really a very satisfactory showing, when we consider how slow the vast majority of mankind (professional and unprofessional) are to accept any new dogma.

The report contains much valuable information, but as our paper is only to show that the diseases of children which are attended with the greatest fatality are being brought under such sanitary conditions as tend to lessen the mortality, we will follow it no further.

If we accept the estimate of statisticians of the actual cash value of each male and female who live to attain adolescence at one thousand dollars, then add to this financial value the intellectual worth of hundreds of thousands of children who perish annually from infectious diseases—that are in the main preventable—we have but a faint conception of the vast loss the world sustains by this fearful mortality.

In view of all this, humanity is ready to bow at the footstool of science, and beg that the ratio between those who live and those who die at the tender age be diminished, and that they have thrown around them the protecting care of hygienic medicine. The progress of science in none of its departments has ever reached the highest degree of perfection by steady, monotonous and gradual advancement. For long it has appeared to be so, until some fortunate individual, endowed with rare genius, utilizing the knowledge gained from all sources, has evolved from the womb of time some hidden truth which in a brief period has effected more than years of patient toil, and marked his epoch as an era, sending his name across the empyrean of thought like a meteor flashing across the heavens, winning for science incalculable benefits, and for himself glory and renown.

ORIGINAL ARTICLES.

ON THE TREATMENT OF DIPHTHERIA.[1]

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This paper is on the treatment of diphtheria. It is brief, for in this presence it would be inopportune to specify in minute detail all that would be required for the tyro. Nor shall your time be taxed by the recital of cases.

A summary of the treatment of diphtheria would hardly be intelligible without first defining in some particulars the nature of the disease. This will involve the question: Is diphtheria a local disease? If this disease consist essentially in the redness, swelling and soreness of the mucous membrane of some part of the throat, followed by the exudation and formation of a pseudo-membrane upon that part, then topical applications will constitute the rational and efficient mode of treatment.

The fascinations of science are liable to bias the mind and lead the judgment astray; as, for instance, the mycologist finds certain organisms—the bacterium termo and bacilli—in the pseudo-membrane in the throat; he observes further that these microbes multiply with great rapidity, and with the exudate constitute the pathognomonic membrane of diphtheria. Moreover, he may trace these micro-organisms, as they penetrate into the tissues, enter the blood-vessels and lymphatics, and through these channels, he assumes the general system and distant organs become affected. If this be true, and the only mode of attack, then the doctrine that the constitutional symptoms are secondary, and arise from the migration of germs from their nidus in some part of the faucial membrane, must be accepted. Again, because the local symptoms are sometimes severe while the general symptoms are mild, it is held that diphtheria is a local disease.

Diphtheria a general disease.

1. It is characterized by a period of incubation.
2. The general symptoms appear before the local.
3. The introduction of the germs by inoculation upon a distant part of the surface is followed by the appearance of the false membrane upon the faucial mucous membrane.
4. The membrane may form, under favorable conditions, upon various parts of the body.

These assumed facts would seem to be valid reasons for the belief that the throat affection is a local manifestation of a general disease.

Diphtheria is not croup.

1. Diphtheria is infectious. 1. Croup is not.
2. Diphtheria is a general disease. 2. Croup is local.
3. Diphtheria is an epidemic asthenic disease. 3. Croup is a sthenic local inflammation.
4. Diphtheria may be followed by paralysis. 4. Croup not.
5. Diphtheria may be complicated by albuminuria. 5. Croup not.
6. The diphtheritic membrane involves the subjacent tissues. 6. In croup the exudate becomes a solidifying membrane upon the mucous surface.

In the management of diphtheria it is of the first importance to recognize the infectious nature of the disease. For the protection, therefore, of the healthy, isolate the sick. The room assigned to the affected should contain only the simplest articles of furniture. Carpets, curtains and upholstered furniture should be removed. The atmosphere of the apartment should be kept at a uniform temperature of about 72°, and good ventilation should be secured without exposing the patient to draughts of air.

After the termination of the case, the thorough disinfection of the room, bedding and furniture should never be neglected, and the same may be affirmed of the clothing and persons of the attendants, and of the convalescing patient, as well.

The indications of treatment may be formulated as follows:

1. Destroy the septic germs in the blood.
2. Eliminate effete material from the system.
3. Prevent the formation of, or remove the pseudo-membrane.
4. Control pain and restlessness.
5. Sustain the strength of the patient.
6. Prevent the sequelæ.
7. Perform tracheotomy (?) or intubation.

The asthenic nature of the disease should be borne

[1] Read in the Section on Diseases of Children, at the Thirty-Seventh Annual Meeting of the American Medical Association.

in mind, even in the earliest stage, that the treatment may be preventive of the possible sudden prostration which precedes the dangerous complications. The alimentary canal should be freely evacuated. This may be accomplished by exhibiting some unirritating agent, as castor oil, rhubarb, or a suitable dose of the compound cathartic pill (½ grain or 1 grain).

Keeping in mind the indications which have been tabulated, some combination of remedies may be devised which will meet most of the requirements of the case. And it is fortunate that the remedies from which experience justifies an expectation of benefit are not incompatible, and may therefore be grouped. It is also worthy of consideration, that medicines intended for children especially should be rendered as palatable as possible. For this purpose the syrup of lemon may be substituted for the glycerine and water in the following prescription.

The following prescription is suggested as an example of such combination:

℞.	Tr. ferri chloridi	℥j.
	Potas. chlorat	℥ij.
	Acid hydrochloric dil	m xx.
	Tr. capsici	℥j.
	Morph. muriat	gr. ss.
	Glycerine	℥ij.
	Aq. destil	℥ijss.

M. S. Give a teaspoonful every hour or two or three hours, according to the urgency of the symptoms.

Of course the proportions of the several ingredients will be varied in different cases to adjust the doses to the age and condition of the patient. The directions for taking the mixture given above, however, convey but an imperfect idea of the most efficient mode of using it. The patient should be required to take a drink of water, then immediately take the mixture undiluted. By this mode several indications are fulfilled at one and the same time. An efficient local application is made to the throat each time the mixture is administered, and the constitutional tonic, antiseptic and anodyne effects are also secured. The water which was taken before the medicine will be sufficient to properly dilute the remedies in the stomach, and thus prevent any irritation of that organ.

In mild cases this prescription will fill all indications, and a large proportion of cases in which this treatment was commenced early will progress and terminate as mild cases, which under some other course would prove severe and endanger the life. It will be unnecessary to annoy the patient by making other local applications. Moreover, there is good reason to assume that the paralysis which is sometimes a serious complication during the convalescence is due to impoverishment of the blood, the restoratives contained in this mixture should therefore prove a powerful preventive of this complication. Experience justifies this expectation, for paralysis will be encountered but seldom during the progress of the disease or in the convalescence.

The same may be affirmed of the effects of this mixture upon the local symptoms and upon the formation of the pseudo membrane. The local pain, the congestion and swelling are relieved, and it is not unusual to see the forming membrane disintegrate and disappear within twenty-four hours after commencing the treatment. The earlier suitable topical applications are made to the exudate the more easily may it be removed. Unquestionably the case is sometimes made worse instead of better by the frequent resort to the probang, charged with escharotics or irritating agents. Besides, the excitement produced by this procedure must result in injury to the patient, especially when force is required to overcome the resistance offered by the child from fear and dread of the operation.

The importance of surrounding the patient with a warm atmosphere has been asserted. It is also important that the air be kept moist. The inhalation of simple warm aqueous vapor will produce benefit by its solvent effect upon the exudate, and also by allaying irritation and discomfort of the fauces. While this is being done additional benefit will be attained by charging the vapor with some agent or agents of recognized power in resolving the membrane, and also efficient as antiseptics, as aqua calcis, ecalyptus, oil of turpentine. Pepsin or trypsin may have a beneficial effect in dissolving the membrane, when the ordinary remedies fail.

The steam atomizer will be found efficient in utilizing the vapor. After a certain age, no difficulty will be experienced in directing the spray into the throat. And even in cases of very young children, the timidity may be readily overcome by placing the atomizer when in use (and it should be in use while the false membrane persists) at a distance from the face, and gradually approximating it till the vapor is inhaled freely. The same object may be attained by causing the vapor, charged with the solvent, to rise from an open vessel placed contiguous to the patient.

Of albuminuria it need only be said that it is present in a large proportion of cases, and that while the kidney is large and pale, it is not indicative of the serious renal complications, as in scarlatina, and it is exceptional when any serious effects from it become chronic. Iron and chlorate of potash would seem to be indicated for this phase of the case, and these are contained in an eligible form in the prescription already given.

Too much stress cannot be laid upon the importance of snstaining the strength by the liberal use of nourishment. Though the patient may feel no desire for food, he may be induced to take it, if it is offered in a concentrated fluid form, which should be repeated at short intervals.

In conditions of great depression stimulants are indicated. It is a fact of common observation that alcoholic stimulants are well borne in diphtheria, and that intoxication is not likely to follow even the free administration of whiskey. So beneficial are stimulants, that the free use of spiritus frumenti is considered by some as specific treatment (?) in diphtheria. Under the same condition it will be natural to cast about for other active tonics, and quinine will be among those selected. That quinine produces any specific action in diphtheria is problematical, and when administered, it should be for its tonic effect.

Strychnia is the remedy frequently prescribed for the removal of paralysis complicating diphtheria, as

if this drug had some specific influence in restoring muscular power. Query—Can strychnia be relied on for restoring innervation in this, as in some other forms of paralysis? Are not the indications here first, to establish assimilation, and second, to improve the quality of the blood?

Galvanism is an agent of undoubted value in the treatment of these paralyses, by stimulating nervous power, by exciting muscular contractions and by increasing the nutrition of all the structures involved in the paresis.

Should tracheotomy be performed, even in extreme condition of the patient in diphtheria? It is true this operation has been performed many times when the patient was in great peril; and sometimes recovery has followed. It would be just to say that the recovery in at least a minor proportion of cases has been due to the operation. This, however, has happened so seldom that the procedure has long been regarded by the laity with disfavor; and were the whole truth stated, undoubtedly the profession regard tracheotomy as the forlorn hope. And furthermore, there is reason to believe that in a proportion of cases, the fatal result might have been avoided, had the surgical interference not been interposed.

When we review the past we can see but little in the results of tracheotomy that is reassuring. Any procedure, therefore, which promises equal benefits, and is at the same time free from the objections indicated, will surely be hailed as an improvement. Intubation, it is now claimed, offers these advantages. Since the revival of this procedure by Dr. O'Dwyer a little more than a year ago, it has been tested in many cases, and the results as reported have been so satisfactory as to encourage the hope that it will soon supersede tracheotomy, at least in the majority of cases. It is certainly free from the objections which render cutting so unpopular. The consent of the parents is easily obtained. No solution of the continuity of tissues is produced, to add to the complications which already exist. It is therefore bloodless. It is not particularly difficult of performance. The relief is many times immediate.

INTESTINAL ANTISEPSIS.[1]

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Cathartics have constituted no small part of the means employed in all ages in the treatment of disease. They have probably introduced the treatment of more cases of disease than any other class of remedies. Having been universally used they must have been found beneficial or they would have fallen into disuse. Their salutary influence has been explained by saying "they corrected the secretions," "*opened up the portal circulation*," cleansed the "*primæ viæ*;" that they acted by depletion, and derivation; that they stimulated the liver to increased secretion of the bile, and thus wrought out their errand of mercy.

[1] Read before the Ohio State Medical Society.

All this has been very satisfactory in times agone; but it is no longer sufficient for the demands of an exacting, if not an exact, professional science. Among cathartics, mercury in some form has readily held the first place, because it was easily administered, prompt in action and more certainly followed by good results than any other agent of this class.

Now is there any scientific basis for this confidence in the value of cathartics, and especially in the value of mercurials, or is it simply "a rule of thumb"? Is all which can be said on this subject contained in the maxim "*Experientia docet*"? Certainly there must be some reason for the use of these remedies aside from those already given, and it will be the object of this paper to see if it can be found out, and stated in clear and definite terms.

In order to get at the bottom of this matter let us take an inventory of the stock we have on hand, bearing on this subject. When we have accomplished this we shall find, I think, we can explain the beneficent action of cathartics, on the theory of antisepsis in a satisfactory manner, and at the same time find a solution for certain morbid processes hitherto imperfectly understood. We cannot hope to elucidate everything that lies in this direction, but we can perhaps "blaze a way" along which some wiser one will build a royal road.

Digestion is partially, not wholly, accomplished by bringing the food into contact with the unorganized ferments. These are ptyaline, pepsine, pancreatine, etc. Ewald says that at its last reduction digestion is a process of hydration. By the action of the saliva and the pancreatic juice, starch $C_6H_{10}O_6$ becomes $C_6H_{12}O_6$ or $C_{12}H_{22}O_{11}$, as the change results in glucose or maltose. By the action of the gastric juice albuminoids are changed into albuminose, or peptones. They are readily soluble in water, immediately absorbed, and cannot be recognized in the blood; being, as it is believed, reconverted into albumen. On the pancreatic juice we depend for still further action upon starches, the proteids, and fats. A peptone is produced in an alkaline fluid which differs but little from that produced in the stomach in an acid medium (Foster). Leucin and tyrosin are also produced from the proteids. The fats are split up into glycerine and acids, as well as emulsified by the action of the pancreatic secretion.

So much is accomplished in the process of digestion by means of the unorganized ferments. These are chemical agents, and as such can have but a single course of action, other things being equal. The organized ferments, of which we shall speak hereafter, may be modified in their action apparently in a variety of ways—either by the liquids in which they grow, the presence or absence of air, etc. The action of organized ferments results in putrefaction; while the statement is made on authority that the gastric juice *arrests* putrefaction. Whether this be so or not is not deemed important in this discussion.

Putrefaction, then, is the result of bacterial action. A great number of bacteria enter into this process. By their action starch is changed into sugar, and sugar is changed into lactic acid, butyric acid, and mucilage, alcohol into acetic acid, urea into carbon-

ate of ammonia, albumen into peptones and other similar products, and in the midst of this process other bodies are produced. These bodies are quaternary alkaloids of various chemical reactions; some are poisonous and some are not. They are now known as ptomaines. Besides these, indol, phenol, skatol, sulphuretted hydrogen, ammonia, carbonic acid, and water, are produced. This is sufficient to show that to some extent the process of digestion is similar to that of putrefaction. But putrefaction is due to bacterial action, and when we learn that indol, phenol, and skatol are produced in the process of digestion, as we call the reduction of the food in the stomach and the intestines, we are led to inquire if the digestion of the food is not supplemented by bacterial action in the intestines. Putrefaction cannot take place when bacteria are excluded. This is placed beyond dispute by the experiments of Koch, Pasteur, and others, and the whole doctrine of antiseptic surgery rests on this affirmation.

I think I shall be able to show that when digestion is not normally performed, it is fair to infer the anomaly does not depend upon variation in the quantity or quality of the gastric or other digestive fluids, but upon the subversion of the power of the normal fluids by intense bacterial action. In other words, the process is no longer one of digestion, but of putrefaction.

The specific action of a few bacteria is known. The bacillus amylo-bacter is everywhere the cause of butyric fermentation. It changes, starch, sugar and lactic acid into butyric acid. The lactic acid ferment, which is a bacillus, changes milk sugar into lactic acid. *Mycoderma aceti* changes alcohol into vinegar. These are but a few of the immense number of the bacteria in the stomach and intestines. The quantity of hydrochloric acid in the normal gastric juice is but .2 per cent.; when the proportion is increased to .6 per cent. digestion is arrested. When the fluids of the stomach become intensely acid, rise in the throat and set the teeth on edge, this acidity is due to bacterial action, or putrefaction of the food materials in the stomach. It is an evidence that putrefaction in the stomach and intestines is no longer supplementing the action of the unorganized ferments, but has taken its place. This bacterial action upon the food in the bowels is evidently much more important than has been usually supposed.

Duclaux says that the action of bacteria is as important as that of the normal intestinal liquids in the process of digestion in adults. There is reason to believe that all experiments which have been hitherto performed to ascertain definitely the action of the unorganized ferments will have to be considered anew, for it is now evident most, if not all, are vitiated by a failure to take account of bacterial action. It seems probable that most of the changes which occur in the intestines which have been attributed to the *succus entericus*, are due to *bacterial action*.

"The meconium contains no bacteria. Bienstock has isolated five different bacteria in the stools. Bacteria which are so numerous in the mouth do not pass into the intestines but are slain in the stomach by the gastric juice. There are five kinds of bacilli in the stools. The first two determine no disease in mice; the third is pathogenic; its culture determines œdema and death in mice in twenty-four hours. The fourth and fifth are very important in the phenomena of digestion. They are not found in the stools of infants until after weaning." This, coupled with the statement of Senator that there is no indol or phenol in the intestines of the nursing infant, is important. "One of these bacilli decomposes albumen, the other hydro-carbons. *The first is not found in the stools of infants fed solely on milk.*" Hence there is neither indol or phenol in these stools, these products being the index of bacillar action or putrefactive changes.

Bienstock proposed the following questions: "Will the last two bacilli decompose sterilized albumen while the first three will not? Are products (indol, phenol, etc.) formed during the life of these bacilli by the decomposition of albumenoids and carbohydrates? Finally, whether it was possible to cultivate these bacteria to a state of purity, both before and after the decomposition of albumen? All of these questions were answered affirmatively. Bacillus number 4 always produced peptones from albumen and gelatine." I may remark here that the pancreatic fluid does not produce peptones from gelatine (Foster), and the products described by Nencki, Bauman, Salkowski, and others, (*i.e.*, indol, phenol, skatol). Bacillus number 5 by action on milk formed alcohol and lactic acid.

These bacilli decompose albumen and hydrocarbons in the intestines.[1] The *bacillus subtilis* produces peptones, as one of its functions in the process of putrefaction. In the germination of seeds we can study the action of bacteria upon starches, as we have studied their action in digestion. Germination is involved in putrefaction. "That which thou sowest is not quickened except it die." Bacteria, and not light, heat, and moisture, are the agents which inaugurate those changes in the seed which cause them to grow. They set in motion those forces which produce the blade, the ear, the full corn in the ear. Sterilized seeds were planted in sterilized soil, moistened by sterilized milk; all was enclosed in sterilized glass vessels, the openings to which were stopped with cotton. Air was thus allowed free access, but it was filtered from all bacteria. Under the most favorable conditions the process of germination was in abeyance for eighty-five days. The stopper of cotton was then removed, when at once germination begun.[2]

We have then found a solution for the production of diastase in the germination of seeds in the action of bacilli, a process hitherto most mysterious. Out of putrefaction life arises in the growth of the plant. So out of putrefaction—as well as digestion—arises the protoplasm which nourishes our bodies.

But digestion in the intestines not only produces that which, by absorption, builds our bodies; but in like manner poisons are produced which, in the mysterious economy of nutrition, are destroyed, when its processes are normal, or when they are disordered they accumulate and work mischief and death. In

[1] "Bacteria," Cornil & Babes, p. 124 et. seq.
[2] Progrès Médical, 1885.

the process of putrefaction poisons are elaborated which are deadly. Deaths from wounds infected with cadaveric poisons are sufficiently common to leave no doubt on this point. These are undoubtedly due to the bacteria. These alkaloids have been isolated from the putrefying flesh and injected into animals with fatal results. In like manner poisons have been extracted by dialysis from the contents of the intestines which have been injected into the bodies of animals with like fatal results.

Selmi and others assert that indol, skatol and phenol in the intestines are the indices of bacterial or putrefactive decompositions in the intestines. Of this there can be no doubt when we remember these substances are not present in the intestines of the young whose stools contain no bacilli.

If poisons capable of absorption are produced in the intestines, what becomes of them, and how is the system protected from injury? Schiff showed long ago that if the portal vein was ligated in an animal during the digestion of a meal, the blood in the right ventricle became intensely toxic, and this toxicity did not otherwise exist to so great an extent. He therefore concluded one function of the liver was the destruction of poisons which were introduced from the alimentary tract. Recently M. Rogers, studying the action of the liver on various poisons, has concluded, in accordance with the opinion of Schiff, that the liver arrests notable proportions of various alkaloids introduced into the organism, such as nicotine, strychnine, cicutine, veratrine, and caffeine. He has found the liver exercises a similar action upon alcoholic extracts of putrid substances, and intestinal contents. He has demonstrated that normally the portal vein contains toxic substances arising from intestinal fermentations.

In order to kill a rabbit weighing one kilogramme it was necessary to inject twenty-five cubic centimetres of dog's blood coming from the jugular or crural vein, eleven cubic centimetres from the portal vein, and twenty-two cubic centimetres from the hepatic vein. After intestinal antisepsis a dose of twenty-two centimetres was required of the blood of the portal vein. This author found that this function of the liver disappeared when it no longer contained glycogen.[3]

Indol, phenol and skatol are substances which enable us to recognize putrefaction, whether they are found inside or outside of the body. Indican in the urine is the index of the formation of indol in the intestines, and indol is due to bacterial activity. The urine of the newly born child contains no indican, and the meconium no bacteria and no indol. Hence it seems demonstrated that the urinary indican expresses the amount of indol absorbed. Indican is increased in the urine, in intestinal invagination and peritonitis, in typhoid fever, cholera morbus, cholera infantum, in the diarrhœa of consumptives, chronic gastritis, and cancer of the stomach and liver, as well as Asiatic cholera, dilatation of the stomach, and lienteric diarrhœas.[4]

[3] Progrès Médical, No. 8, 1886.
[4] Arch. Gén. de Médecine, 1884.

Indican is said to be increased in obstruction of the small intestines, and unaltered in that of the larger. Hence it becomes of value in the determination of the location of strictures of the bowel.

Bouchard has studied this subject clinically. He has found fresh fæcal matters contain alkaloids in much greater quantity than the urine, and the richness of the intestinal matters in alkaloids is proportional to the intensity of the intestinal fermentations. In a case of putrid diarrhœa he estimated the proportion of bacilli at one-third of the mass, and the alkaloids at fifteen milligrammes per kilo, the urine contained forty or fifty times as many alkaloids as normally. Putrefaction in the intestines produces a large number of products, such as ammonia, marsh gas, sulph-hydric acid, butyric acid, lactic acid, and indol, phenol, excretive and quaternary alkaloids. Bouchard has introduced these matters into animals by the stomach, lungs, subcutaneously, or into the veins. Coma, convulsions and paralysis have succeeded large doses. In men headache, vertigo, ringing in the ears, deafness, fatigue, and depression of spirits succeed the administration of small doses. Intestinal occlusion and long retention of fæcal matters increase the alkaloids in the urine, and are the symptoms of intoxication.[5]

Bouchard formulated three propositions:[6]

1. Alkaloids exist normally in the bodies of living individuals.

2. These alkaloids are found in the digestive tubes and are probably elaborated by the vegetable organisms which are the agents of intestinal putrefaction.

3. The alkaloids of the urine normally represent a part of the alkaloids of the intestines absorbed by the mucous membrane and removed by the kidneys.

On March 22, 1886, Bouchard continued a report of his investigations upon the poisons existing in the normal urine. He says the organism is fortified against self-poisoning:

1. By intra-organic oxidations.

2. By the liver, which arrests some and destroys others.

3. By the emunctories, which excrete them in great abundance.

4. The well-conditioned man produces in a mean of two days and four hours a mass of urinary poison sufficient to poison him.

The toxicity of normal urine has been demonstrated by intra-venous injection in rabbits, and it has been observed times without number in cases of urinary infiltration in the human being, who in the highest health has suffered from traumatism. "The symptoms following the injection of normal urine are contracted pupils, accelerated respirations, frequent urination, somnolence, diminished reflex action, and death without convulsions." This toxicity is increased by simple colds, any fever, or other indispositions. The toxic principle seems to reside in the coloring matter, for by passing the urine through animal charcoal its toxicity is diminished.[7]

The foregoing much too brief discussion I think

[5] Comby, Progrès Médical, May, 1884.
[6] Progrès Médical, December, 1884.
[7] Progrès Médical, loc. cit.

sufficiently establishes: that putrefaction plays no unimportant part in normal digestion; that this putrefactive process may exceed the bounds compatible with health, and even life; and that by a careful study of the urine we have the means in our hands which will enable us to recognize many hitherto unrecognized conditions as the result of auto-intoxication from products elaborated in intestinal putrefactions.

We shall now turn our attention to the investigation of certain diseases of the intestines, and see what can be learned of their special pathology. M. Damaschino reports observations made upon infants, in whom the matters passed are either green when they are voided or become so on exposure to the air. The latter form frequently runs into the former, and is not uncommonly the prelude of *cholera infantum*. When these green matters are spread upon a cover, stained with methyl violet, an immense number of bacilli are revealed, and their number augments as the affection becomes severe; as the disease declines the number decreases. These bacilli are never found in the cells or in the epithelial masses, but between them; they are sometimes united in an albumenous matter. The stools of patients with green diarrhœa have no resemblance to those of yellow diarrhœa in their bacillary contents.[8]

I may here remark that during the year 1885 I made many observations upon the stools of patients with diarrhœa, answering to the description given above, and can confirm its accuracy. I have further studied the stools of patients with *cholera infantum* and *cholera nostras*, and in both I was surprised to find the solid matter of the stools seemed to be composed almost entirely of bacilli instead of salt crystals, epithelial cells and intestinal mucus. In some of these cases I was able to detect a decided increase in the quantity of indican in the urine. This conclusion was confirmed by Dr. O'Brine, of the Ohio State University, who is an expert analytical chemist. In these cases, then, we have learned there are enormous numbers of bacilli in the intestinal discharges; we have also proven the presence of an increased amount of indican in the urine, two factors of great importance. From the statement of Damaschino, quoted above, we learn that in the green diarrhœa, which is frequently the prelude to cholera infantum, there is an immense number of bacilli; from other authorities we learn indican is increased in the urine in cholera infantum.

How are we to interpret the relation of cholera infantum and the bacilli? These are the agents of putrefactive changes in the food materials in the intestinal canal. In this putrefaction poisonous alkaloids are produced. These are absorbed and produce acute poisoning, as shown by diarrhœa, vomiting, and collapse. Should this seem a fanciful explanation of these conditions, when we have so often observed, either in our own practice, or read accounts of, cases of meat poisonings, which are due to flesh in the process of putrefaction, from which ptomaines have been extracted capable of producing similar symptoms? Heat cannot be ignored as a factor, but it must rank as a predisposing cause. If anything more, why do not cases of cholera infantum occur just as frequently among children who are nursed at their mother's breast? The answer is this, as already quoted from the investigations of Bienstock: There are no bacilli in the intestines of children fed on *pure milk diet; i.e.*, at the mother's breast; hence no chance for fermentation, and consequent poisoning from the products of fermentation.

When mixed food is used the possibility for pure feeding is gone. How often an outbreak of cholera infantum has followed the eating of a bad conditioned banana or apple. As we know that the agents which produce putrefaction are the same both inside and outside the body, we can understand why the introduction of swarms of bacilli into the intestinal canal by means of decaying fruits, would be fraught with greater dangers far to the child than its exposure to heat. Hence we conclude heat acts in producing cholera infantum by rendering bacillar infection of the intestine easier, rather than by overcoming the vaso-motor system.

In like manner we would explain the causation of attacks of cholera morbus and simple cholera. A ptomaine extracted from pure cultures of the cholera bacillus will produce all the phenomena of cholera, equally as well as the injection of the fluid from the intestines of the victims of the disease. Nor are the alkaloids produced in the intestines of the same kind always; as the bacilli may vary, so too may their products, and their effects upon the organization. Instead of vomiting, diarrhœa, and collapse, we may have headache, fainting, lethargy, palpitation of the heart, eructations, mental depression, distension of stomach and bowels, aching in limbs, and indisposition, as well as incapacity for muscular exertion, somnolence, etc.

But in all cases in which an examination of the urine reveals an increase of indican, we may with confidence attribute the symptoms to auto-intoxication from products of intestinal fermentations. While laying so much stress upon the action of the intestinal ptomaines, I ought perhaps to mention Gautier's new observations on the leucomaines—alkaloids which are produced in the normal disintegration of the body, which have been eagerly seized upon by the opponents of bacterial pathology to explain all forms of auto-intoxication. Manifestly they do not act as poisons unless they accumulate; when they accumulate they do not act as promptly or as energetically as the ptomaines, and at present the quantity of leucomaines known to exist at any time in the body has an almost insignificant relation to that of the ptomaines which may be extracted. After this the ptomaines and the leucomaines must be considered when the subject of uræmic intoxication comes up for discussion, and it seems to my mind very probable that the doctrine of the production of ptomaines by intestinal putrefaction is going to help us explain some of the phenomena which, under our present theories, are totally inexplicable.

How, for instance, can we explain the occurrence of convulsions in one case of uræmia, and their absence and a condition of coma in another case, if the

[8] Progrès Médical, December, 1884.

cause be the same in both cases? We know there are many varieties of bacilli in the intestines, and they produce many alkaloids. Some are harmless, others are convulsant, like strychnine, and others still, act like atropine. On the assumption of the formation of different alkaloids we can account for the various manifestations of intoxication when they are absorbed. Between the formation of toxic alkaloids and their fatal manifestation after absorption into the system, stands first the liver, which destroys notable proportions, as shown by Roger; then another portion eliminated from the blood by the action of the healthy epithelium of the renal tubules; and if in any case either of these guardians of the portal of life fails, the result is inevitable—death comes by convulsions or by coma.

Since writing the above Bouchard's conclusions from the study of the urine in the production of uræmia have come into my hands. They have not yet been published by him, and I have to take them second hand. I make the following condensation of his views, from a "critical review" of the subject.[9] Seven substances enter into the production of the phenomena of uræmia:

1. The diuretic, which is urea.

2. The narcotic, whose nature is yet unknown; all that can be said is that it is organic, not fixed by charcoal, soluble in alcohol.

3. A sialogue, organic; like the former, of unknown nature.

4. There are two *convulsants*. These do not manifest their action when the urine is injected, for the narcotic kills before they can act.

5. A substance which contracts the pupil.

6. Finally, there is a substance which depresses the temperature. After the injection of urine the animal cools.

Here is a scheme which includes all the factors which are necessary to explain a uræmic attack. The organic compounds creatine, creatinine, leucine, tyrosine, etc., have no effect. The potassic salts in excess have a poisonous influence. The scheme which he proposes for *pathogenic treatment* is: Hinder tissue metamorphosis, diminish the action of the liver, administer an aliment containing few minerals, oppose *intestinal* putrefactions.

I will cite some cases illustrating forms of intoxication from putrefactions in the intestines.

"A professor, æt. 38, robust, was taken during the night of the 4th or 5th of January with violent colics after having eaten and drunken copiously. He performed his duties the next day in school. The colic continued and became more violent; he went to bed in the evening, and when I saw him he complained of nothing but abdominal pains and diarrhœa. Pulse 76; skin moist; tongue coated; no appetite. No bad odor of breath; discharges odorless; belly not swollen, but resistant. Pressure is painful in the ileo-cæcal region, over a space the size of palm of hand. Low-pitched tympanitic sound here. Night disturbed by vomiting. In the morning patient had discharges with the odor of rotten eggs. I am able to confirm this assertion of the patient. While I was examining him he tried to rise and fainted; his lips became pale, pulse frequent and feeble, sometimes not perceptible; pupils normal, reacting to light. This lasted a minute and one-half or two minutes. The patient recovering from this, complained of præcordial distress and clouds before the eyes. After this attack he had a discharge of urine with the odor of sulphuretted hydrogen, and it blackened acetate of lead. The weight and anxiety persisted. He had a similar attack in the afternoon. The urine no longer contained sulphuretted hydrogen. In the evening there was little fever; at midnight copious stool. Patient was well next day. Senator was of the opinion the sulphuretted hydrogen was produced by intestinal putrefaction, which determined all the symptoms."[10]

The above case is a fair example of intense poisoning from bacterial or putrefactive processes in the intestines, and illustrates the statement of Bouchard: If the poison produced in a day was at once absorbed death would result instantly.

Mrs. A., aged 30, supposed to have had an abortion a week previously; no flowing for three days. Vomits now and has constantly for several days. Nourished by peptonized milk by rectum. Pulse 110, feeble; skin pallid and moist; temperature normal. Lethargic, speaks only on being addressed, somnolent. Abdomen distended, no painful spots; tongue dry and coated; pupils dilated. Having in view the possibility of poisoning from intestinal fermentations, stopped all rectal alimentation, and gave gr. ¼ doses of calomel rubbed up with milk and sugar every three hours. This was continued for two days, when, the bowels having been freely moved thereby—as well as rendered antiseptic—the patient was relieved of all bad symptoms, and from this time made an uninterrupted recovery. The urine was not examined in this case.

How often in the "second summer" we observe cases like the following: Child, 18 months, weaned in early summer, begins to emaciate, vomits occasionally milk in curds, has pasty, greenish, acid stools, or when he eats meats they escape in the same kind of masses, and with little or no change of character by the action of the digestive fluids. There are attacks of diarrhœa, and the stools are composed of mucus, with small quantities of what seems to be fæcal matter. The skin is pallid or sallow, flaccid and non-elastic. The abdomen is distended, the sleep disturbed, and there is grinding of teeth. Sometimes convulsions, at other times depressions with sweats.

Again, in adults there are cases of watery diarrhœa which persist for weeks and months in spite of simple evacuants and astringents. The stools are largely composed of bacilli, and the urine loaded with indican. Here small doses of mercury work wonders.

There is no doubt but the bile has an office in the prevention of intestinal putrefactions. We are all quite familiar with cases in which the stools remain clayey, which are also intolerably fetid. By common consent this condition has been attributed to the want of bile in the intestines, by failure of secretion or from

[9] Uræmia by Giraudeau. Arch. Gén. de Méd., 1866, p. 212, et seq.

[10] Arch. Gén. de Méd., 1884, p. 484.

obstruction. Calomel or blue pill has been administered for time out of mind for this condition with favorable results. The benefits derived were supposed to be due to the action of calomel in increasing the flow of bile. Years ago the British Commission appointed to investigate the alleged cholagogue action of mercury reported that it had no such action; and yet the fact remains, established by the experience of hundreds of careful observers, that mercurials produce good results in such cases. Other theories rose to explain this benignant action of mercury. Bacteriological studies have led us to the conclusion that mercury, instead of increasing the natural antiseptic of the intestines, either directly or indirectly, destroys the bacteria, and thus performs for the system a duty which it can no longer discharge.

It has been long known that mercurials have a special action upon the small intestines. It is said they remove the excess of peptones, and thus relieve the headache, bad taste, aching in the muscles, foul eructations, abdominal distension and feeling of general malaise which so often follow the indulgence in a full banquet, washed down with "copious draughts of generous wine." This is due to the antiseptic action of the drug, for I have seen it produce the same result in doses much too small to produce catharsis. Other drugs fail to do this even when the catharsis has been prompt and voluminous. I know of no means so potent for arresting the fermentations which hold high carnival in the stomach and bowels of the patient who has been on a prolonged drunken spree as a mercurial. That bacterial action is raging, and is a cause of many, if not most of the nervous phenomena, any one who examines the ejecta from the stomach and bowels of such patients may easily learn. The bad odor of such patients is not due entirely to alcohol. In dilatation of the stomach and other affections we can use mercurials to advantage for their antiseptic action.

Liebermeister says, after having used calomel in about 800 cases of typhoid fever: "I have every reason to continue it and recommend it to others."[11] Whether calomel acts by elimination of the poison by its cathartic action or not Liebermeister does not say. But it does lower temperature, and reduces mortality. It has been used in doses of from gr. iv to xx. The examinations of bacteriologists and the general course of the fever lead us to believe that typhoid fever is of parasitic origin. Without pressing this statement, we all know that putrefactions are intense in the small intestines in this disease, and we can readily see that if mercurials are introduced into the intestines of patients they will act on the bacilli which are the cause of putrefaction, and thus remove one incident in the course of systematic poisoning which occurs in this disease. The testimony of Senator on the increase of indol in the stools and of indican in the urine, is conclusive, and enables us to thus explain the action of calomel in reducing the mortality of typhoid fever.

In the treatment of the early stages of cholera infantum mercurials have been used from the time they were introduced. Tho' some authorities write doubtfully of their value, there are but few who have not used them with advantage. Their value in this disease is to be attributed to their antiseptic or disinfectant properties, which thus prevent ptomaine poisoning. Other agents have been used in attempted antisepsis of the stomach and bowels. Mercury has been ever and is still the Samson of them all. Pumps and syphons drain, cathartics empty. Mercury kills the morbific agent on the spot, and destroys its producing power. Phenic acid, iodine, bromine, salicylic acid, thymol, and many other agents have been tried, but with no such results.

Bouchard has endeavored to draw therapeutic results from his researches. Since toxic matters are constantly pouring into the intestines he has endeavored to oppose their absorption by fixing these substances. In typhoid fever he has given charcoal in quantities of 100 grams daily, and has thus completely disinfected the typhoid stools; all the fetid substances which give odor to these stools are fixed by charcoal. Under this treatment the alkaloids in the stools and urine diminished. The power of charcoal for fixation will be comprehended when it is remembered that 100 grammes of this impalpable powder represents a surface of 60 square metres. Bouchard has also used iodoform in fine powder, so that a dose of 40 centigrams represents also a surface of about sixty square metres. We may by these means accomplish the antisepsis of the intestines.[12]

Of all disinfectants mercury in some form now holds the first place. Corrosive sublimate in a dose of 80 milligrams (1⅛ grain) will sterilize a litre of meal juice which is swarming with bacteria. This is a large dose of corrosive sublimate by the stomach, but it has tremendous energy. It may, however, be given three times a day in this dose. Phenic acid to accomplish a similar work, must be given in a dose of 100 grains—clearly impracticable from its size if it was not at the same time poisonous. The same objections hold against all the other disinfectants.

I think we have arrived at bed-rock, and are now ready to formulate why mercury has been used and is likely to be used in all time, and also why it has done good and will continue to do good. I think that I may draw the following conclusions:

1. Digestion is due to unorganized and organized ferments, *i. e.*, bacteria.

2. Dyspeptic phenomena are probably due to bacterial action, *i. e.*, fermentations.

3. In these fermentations, ptomaines, indol, skatol, phenol, etc., are formed as in putrefactions.

4. The presence of indol, skatol and phenol is evidence of bacterial action, *a*, because in the meconium there are none of these products; *b*, they are absent in the stools of nursing children; *c*, in the urine of the newborn and the nursing child there is no indican; *d*, when these children begin mixed feeding bacilli appear, and with them indol in the stools, and indican in the urine.

5. These bacilli, while causing putrefactions, produce poisons, which are normally destroyed in the liver, or stored therein, or excreted by the kidneys and bowels.

[11] Zeimsen's Cyclopædia of Medicine, Vol. I, p. 201, et seq.

[12] Comby. Progrès Médical, May, 1884.

6. When the function of the liver is disturbed from any cause, so that the antiseptic action of bile is no longer exerted, the putrefaction and its products increase.

7. Mercurials, by arresting fermentations when in excess in the intestines, prevent the formation of ptomaines and autointoxication and supplement the action of the liver.

8. The beneficial action of mercury is due to its antiseptic properties.

9. Antiseptic medication is indicated in all cases when the indican is in excess in the urine.

MEDICAL PROGRESS.

DIAGNOSIS BETWEEN DISTENSION OF THE FALLOPIAN TUBES AND FIBROMYOMATA OF THE UTERUS.—In a note on this subject DR. P. HORROCKS says: The diagnosis of distension of the Fallopian tube, in the present state of our knowledge, is very difficult; indeed, those who have had the largest experience in operating for this disease, admit that they are never sure that the tube is diseased or distended until they have got it outside, through the abdominal wound. But this difficulty of diagnosis is due to the similarity between distension of the Fallopian tube and many other conditions, more especially pelvic cellulitis, pelvic peritonitis, and ovarian disease. It is, as a rule, not difficult to distinguish between fibromyoma of the uterus and distended Fallopian tube. The broad distinctions between these two conditions are as follows:

1. Fibromyomata, are usually accompanied by menorrhagia, and distensions of the tube are not.

2. Fibromyomata, especially when intermural, cause uterine enlargement; whilst, in distension of the Fallopian tube, the uterus is not enlarged, or only slightly, unless complicated by some other condition.

3. Fibromyomata are usually painless, except that there is often dysmenorrhœa (as in my case, published March 6), and, if large, a bearing-down pain, or sense of weight; whilst, in distention of the tube, the pain is constant throughout the intermenstrual period, aching in character, and aggravated by the menstrual period.

4. Nutrition is not much affected in fibromyomata, whilst it is in distension of the tube, especially when the distension is caused by pus; hence, wasting or loss of flesh is a valuable distinction.

5. The temperature is normal in fibromyomata, raised more or less according to nature and amount, in distensions of the tube.

6. Fibromyomata, when intermural, move much more rigidly with the uterus than distensions of the Fallopian tube.

7. Fibromyomata are much less painful, on pressure, than distensions of the tube.

8. Fibromyomata are usually much firmer in consistence than distensions of the tube.

9. Intermenstrual discharges, usually yellow, are much commoner in distension of the Fallopian tube than in fibromyomata.

10. The position and direction of the uterine cavity is much more affected by fibromyomata than by distension of the tube.

11. Fibromyomata are usually more or less spherical, distensions of the Fallopian tube cylindrical.

12. Aspiration yields serum or pus in hydrosalpinx or pyosalpinx; and blood in fibromyomata and hæmatosalpinx.

13. Distensions of the Fallopian tube are accompanied by pelvic inflammation much more frequently than fibromyomata.

These are, in my experience, the broad distinctions between these two diseases. Exceptional cases occur where the diagnosis is not so easy; but distension of the Fallopian tube is much more likely to be mistaken for some disease of the ovary or broad ligament, rather than for fibromyoma of the uterus.—*British Medical Journal*, May 1, 1886.

SUCCESSFUL EXTIRPATION OF THE SPLEEN.—*La Gazzetta degli Ospitali* (May 23) reports a case from the surgical clinique of the University of Genoa in which Professor A. Ceci removed a greatly enlarged spleen. The patient, an imperfectly developed and very thin girl, aged 17, weighing 40 kilogrammes, and 1.40 metre in height, with very small pulse, had had an abdominal tumor from birth. The transverse diameter of the tumor was 34 centim., the vertical 23 centim., and the circumference about 64 centim. The anterior surface was smooth and convex, the margins sharp and fissured. The posterior surface presented a large lobe on the left. The abdominal walls were very flaccid, so that the tumor could be completely rotated vertically and transversely, and also be pushed into the left hypochondrium, whence, however, the respiratory movements soon caused it to advance to the front of the abdomen. The liver was in normal position. The enormous size of the floating spleen interfered with the patient's movement and nutrition, and was an occasional source of severe attacks of pain, radiating from the left hypochondrium to the præcordial region and the left upper limb, and attended with violent dyspnœa and insensibility. Extirpation having been resolved upon, it was performed on March 20, with strict antiseptic precautions. The incision in the linea alba from above downwards through the umbilicus was 23 centim. (9¼ in.) in length. On opening the abdomen, serious signs of suffocation compelled the suspension of the operation for nearly thirty minutes. Anæsthesia having been commenced with bichloride of methylene, chloroform was substituted for it. A triple catgut and carbolized silk ligature having been applied to the pedicle, it was dropped in. The peritoneum was sutured separately. The abdominal walls were brought together by three metallic points, after Billroth's method. The splenic artery was larger than the subclavian. The whole operation, including the whole interruption, lasted an hour and a quarter. Violent delirium and nervous phenomena simulating angina pectoris soon followed. For two days the pulse could not be counted, and the respiration varied from

70 to 80 per minute. The treatment was by oxygen and nutritive clysters. The wound was first dressed on the eighth day, and almost the whole of the wound-tract suppurated. In spite of strict antiseptic treatment erysipelas supervened, and yet the patient recovered. On April 22 (thirty-one days after the operation) her condition was reported as excellent, only a small superficial wound remaining. The extirpated spleen, with the contained blood, weighed 2400 grammes, equal to 37,036.8 grains, or 77.16 ounces. A courteous note just received from Professor Ceci states the patient is in good health; pulse 80; respiration 22; weight increasing rapidly; complexion florid.—*Lancet*, June 5, 1886.

PHOTOGRAPHING THE RETINA OF THE LIVING HUMAN EYE.—A paper with this heading appears in the *Photographic News* of May 7, by MR. W. T. JACKMAN, of Coggleshall, Essex, and MR. J. D. WEBSTER, and the authors of that paper have been kind enough to forward to us specimens of the photographs they have obtained. The difficulties of making a good photograph of the fundus are extreme, and we can only congratulate these gentlemen on the results of their labors, though it must be admitted that, as yet, it only appears to be possible to obtain a picture of the optic disc and of the retinal vessels as they cross the disc. The first experiments of Messrs. Jackman and Webster were made by placing a small camera fitted with a 2 in. lens in the place of the observer's eye behind an ordinary ophthalmoscopic mirror, but subsequently various modifications were introduced which are fully detailed in the paper referred to. The best light was found to be an albocarbon gaslight, having a reflector behind it and a bull's eye lens in front. It was well borne by the eye. The reflection from the surface of the cornea was long found to be very embarassing, but it was overcome with the exercise of a little ingenuity. In the photograph we have received, the physiological cup in the centre of the disc is very perceptible with the marginal portion of the disc, and the main blood-vessels and their primary divisions are distinctly marked. The result is sufficiently encouraging to lead us to recommend the authors of the paper to persevere in their efforts, and not to be discouraged by failure. Much greater difficulties than those which are here presented have been overcome by patience and the intelligent application of existing knowledge, and we expect soon to receive a still more satisfactory representation of the fundus of the eye.—*Lancet*, May 29, 1886.

OPERATION IN HYDATID DISEASE OF THE LIVER.—DR. SPISHARNV, of Moscow, describes, in the *Vratch*, three cases under the care of Professor Sklifassovsky. All recovered. In one case, a cyst had already burst into the pleural cavity. The Professor is strongly in favor of free incision, and sewing of the wall of the cyst to the edges of the abdominal wound. Statistics are in favor of this proceeding. Neisser has collected 300 cases of hydatid disease of the liver treated after different methods, with Listerian precautions. The results were mostly unsatisfactory. The majority of this series were treated by puncture. Better results were claimed in 1885, by the Mecklenburg physicians and surgeons, in a series of 132 cases. In twenty-five cases, the cyst was allowed to burst spontaneously; 52 per cent. of these died. In seventeen, the cyst was punctured, with 58 per cent. mortality. In twenty-eight cases, incision and fixation of the cyst-wall was performed, with only 20 per cent. mortality. Korach has employed incision in eighteen cases; in six of these, the incision through integuments and cyst-wall was done in two stages. All of these latter recovered; one out of the remaining twelve died. Incision is becoming the most popular method amongst Russian surgeons, who have considerable opportunities of studying hydatid disease in their wards. There can be no doubt that aspiration is a dangerous proceeding. Incision is generally satisfactory, provided that there is no cyst behind that which is opened. If there be another, or several other cysts, the risk of fatal suppuration will be very great.—*British Medical Journal*, May 8, 1886.

ON STRYCHNINE IN DIPSOMANIA.—In the *Vratch*, No. 10, 1886, p. 177, DR. U. M. POPOFF, of St. Petersburg, states that, guided by the works of Magnus Huss, Luton, Dujardin-Beaumetz, and others, he employed nitrate of strychnine in two typical cases of dipsomania, and obtained strikingly successful therapeutic results. In one of the patients a (very gifted man of letters, aged 40), the alkaloid was administered under the skin, in the dose of $\frac{1}{30}$ of a grain at first (during a drinking bout) daily, then every other day, then twice a week, etc. The patient ceased to ask for drink after the second injection; within the next two days, various morbid phenomena (headache, weakness, discomfort, etc.) disappeared. On subsequent occasions, a few injections of $\frac{1}{60}$ or $\frac{1}{45}$ of a grain of strychnine rapidly removed craving, anxiety, irritability, agoraphobia, and other premonitory symptoms of a threatening dipsomaniac attack. The patient each time rapidly improved in all regards, and felt desire for work and society. In another patient, dipsomania disappeared under the internal administration of strychnine, the alkaloid being given for the first two weeks in doses of $\frac{1}{30}$ of a grain, and for another two weeks in that of $\frac{1}{60}$, twice a day, in pills. —*British Medical Journal*, May 1, 1886.

EFFECT OF MENTAL OVERWORK UPON THE TEETH. —Among the hard-worked pupils of the Paris public schools, the teeth become deteriorated in a few weeks after entry. The second dentition is often premature. These observations confirm the statements of Dr. J. L. Williams, who has given great attention to this subject. He has shown that any mental strain shows itself upon the teeth in a short time, both in increased decay, as well as in increased sensibility of the dentine. Dr. D. M. Parker has reported that these same changes are always apparent in men who are in training for athletic trials. As there is not the slightest doubt of the accuracy of these observations, they show that these are matters which demand serious consideration from educators.—*Boston Medical and Surgical Journal*, June 3, 1886.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JULY 3, 1886.

COLD WATER ENEMATA IN CATARRHAL JAUNDICE.

As the subject of the treatment of catarrhal jaundice by enemata of cold water has been under discussion during the past few weeks in some of our contemporaries, it seems proper to call attention to a paper on "Epidemic Jaundice among Children," read by DR. A. Y. P. GARNETT, of Washington, at the meeting of the American Medical Association in Cleveland, in 1883. This paper was based on a number of cases treated by Dr. Garnett during an epidemic of acute jaundice in Washington in the summer of 1881, the epidemic being almost exclusively confined to children under 6 years of age.

Epidemic jaundice among children is of very exceptional occurrence. Von Scheuppel mentions, in his article in Ziemssen's Cyclopædia, only one such epidemic, which was reported by Rhea, and Legg mentions only two—one in Essen, in 1772, reported by Brüning, and one in 1870, at Hanau, reported by Rehm—while from 1742 to 1872 fifty-six epidemics are reported among adults. Sir Thomas Watson mentions an epidemic which only affected young girls, and different writers mentions epidemics which affected men only.

The use of cold water enemata in catarrhal jaundice was first proposed by Krull (in the *Berliner Klinische Wochenschrift*, 1877, p. 159). His method is to inject from two to four pints of water at 60° and this is retained in the rectum as long as possible; the enemata being repeated twice a day if necessary. Dr. Garnett's method of treating his cases differed materially both as to the quantity of water used and as to the frequency of repeating the injections. His cases being children under 6 years of age, it was considered most prudent to use but four ounces of the water at a time, and repeat once every four hours during the day. Löwenthal used one or two quarts at each operation, and repeated but once in twenty-four hours. In Dr. Garnett's opinion the plan of injecting a small quantity of the cold water and repeating it every three or four hours would prove more satisfactory, even in adult cases, than the method pursued by Krull and Löwenthal.

It need scarcely be said, however, that this should not constitute the whole treatment of this affection. An exclusive diet of milk, with lime water, and whipped albumen of egg, and an easily digested meat juice on commencing recovery, is of prime importance. When the temperature is high and the skin dry, the patient should be placed in a bath at 80° or 85°, or may be sponged with water at this temperature. Calomel must be regarded as the most useful drug in the treatment of this affection, and it should be given in small do es. While many prefer to give it alone, rubbed up with white sugar, in doses of one grain every one or two hours, others prefer to administer it in combination with bicarbonate of soda, ipecac, and a very small quantity of powdered opium. For a child 5 years old the quantity of calomel should be about gr. 1-24 to 1-16, with 1-10 each of bicarbonate of soda, and ipecac, and not more than gr. 1-40 of powdered opium; though the soda and ipecac may be given in larger doses. This may be repeated every three or four hours, with the certainty that free evacuations will be obtained. For adults the compound jalap powder is often most useful in causing such a downward pressure as to force out a plug of mucus which is obstructing the duct; but for children this must be regarded as a rather harsh remedy. But for reducing mucous plugs phosphate of soda must be regarded as one of the most efficient of all remedies, and may be given with arsenate of soda. It should be borne in mind that calomel is especially efficient when there is much irritability of the gastro-intestinal mucous membrane, and when given alone or in the combination described above vomiting rarely occurs.

It is also to be borne in mind that as a rule a sick child is almost always thirsty, and that its thirst is not quenched by milk. Nurses, and very many physicians, are too ready to give a sick child milk when it should have water. In the treatment of very many diseases of children the use of alkaline, slightly laxative mineral waters is of great importance. American writers have fallen into the habit of prescribing Ems, Vichy, Carlsbad and other waters which can-

not be readily obtained. The Buffalo Lithia, No. 2, and Bethesda waters of this country may be regarded as much more desirable from any point of view, and for chronic cases, we may add, the Kentucky Blue Lick, which is a sulphurous water. Lemonade is an agreeable drink for adults, but it is undesirable for children, and should never be given to anyone when an alkaline water is being used. Aërated waters and effervescing drinks are not so grateful to children as to adults, at least to children under 5 or 6 years of age, and unless constant nausea demands them they cannot be regarded as having any advantage over plain waters for children of any age. It should be remembered that in very many cases of constant nausea and vomiting the source of trouble may be found in the fact that the stomach is empty or contains a small amount of mucus. This is easily removed by the administration of repeated draughts of warm water, until the stomach is thoroughly cleansed; after which hot water may be given. The Buffalo water, mentioned above, is an exceedingly light water, and is very useful in cases of nausea.

Nitric and nitro-muriatic (Mettauer's) acids are often of great value in the jaundice of adults, but they do not seem to be suited for those cases occurring in children. Finally, may be mentioned Gerhardt's proposition to faradize the gall-bladder, and empty it by compression with the fingers, forcing the bile into the intestines and thus clearing out the obstructions. While it seems to be a dangerous practice even in adults, the successes seem to justify it in those cases.

EXCLUSIVEISM AND SPECIALISM IN MEDICAL ORGANIZATIONS.

That principle or feeling which prompts one man or class of men to assume superiority in some direction over his fellows, and therefore to assert exclusiveness in association, rank or privilege, is probably as old as the human race. In matters of State or politics, it underlies all forms of aristocracy; it prompts the religionist to say to his neighbor "stand thou there, I am holier than thou;" and it does not fail in prompting even men of science to think they have attained an eminence that lifts them so far above all others cultivating the same fields of human knowledge, that they must needs have exclusive social organizations for themselves.

The strong influence of this psychological principle has been well illustrated in the progress of medical organizations in this country. Although every State Medical Society in this country has shown a remarkable disposition to give the fullest opportunity to those cultivating special departments of medical science or practice to present reports or papers regarding their own special departments at any regular meeting; and although the American Medical Association, as fast as new specialties were developed, added new Sections for the accommodation of their votaries, the same spirit of exclusiveism soon prompted each to seek an organization for itself; not for the purpose, as might be supposed, of accommodating *all* practising a certain specialty with more time and freedom of discussion, but directly for the purpose of including in its membership only those who had already gained reputation, that they might on the one hand, avoid the necessity of entering into discussions on a level with the common doctor; and on the other, to more effectually bar the progress of each new competitor in the same field. Hence each new special organization is formed by a few of kindred spirit meeting and selecting those they desire for comrades, inviting them to a subsequent meeting, when a constitution and by-laws are adopted with such provisions that all subsequent additions must be made by the nomination and election of those already members, or even by a small council or committee of censors. Consequently these, so-called, American Ophthalmological, Otological, Gynecological Societies, etc., instead of being composed of all the American ophthalmologists, otologists, etc., who might choose to join them, or a ratio of delegates chosen to represent all, are close corporations to be increased or perpetuated only by the gracious favor of the individual corporators.

The whole process is admirably illustrated by the last so-called National organization just completed, and the proceedings of which we give in the present number of THE JOURNAL under the modest (?) name of "*The* Association of American Physicians." A few months since a dozen or possibly twenty prominent physicians in Philadelphia and New York held a conference and decided to form what was to be called an Association of American Physicians and Pathologists, which it was supposed would complete the circle of special organizations known to the profession. They selected a sufficient number, chiefly from the cities of Philadelphia, New York and Boston, to make seventy-four in all, effected a temporary organization and agreed to hold their first regular meeting in Washington, D. C., June 17, 1886. That meeting was held with the results to be seen in the regular report of the proceedings in the present number of THE JOURNAL. Fifty-six of the seventy-four selected were in attendance. A constitution for permanent organization was adopted, limiting the

number of members of the Association to one hundred and the honorary members to twenty-five; making it necessary that proposed new members must be nominated by two regular members, referred to the Board of Censors and elected at a subsequent meeting, and as a part of the qualifications it is required that the proposed members must have accomplished some scientific or professional work of importance. Another provision fixes the permanent place of meeting in Washington, D. C., the time the month of June each year, and the name of the organization "The Association of American Physicians."

Here are nominally seventy-four, but actually fifty-six presumably eminent members of the profession, forty-two of whom are from the cities of Philadelphia, New York and Boston, forming an association avowedly of so high an order that of the 40,000 American physicians (not counting surgeons and other specialists) only 100 can expect to be members at one time, and carefully guarding the door of entrance for the future, and yet so modest, that they adopt a name directly calculated to create the impression everywhere that this new society is simply an Association of American Physicians and nothing more. Surely this is a serious mistake. There should be something in the name to indicate the distinctively eminent character of the membership. Perhaps the most appropriate title would be "The Association of *Eminent* American Physicians." But if the extraordinarily frequent use of the word "*eminent*" in two or three leading medical journals in New York and Philadelphia and their echoes in Canada and elsewhere, during the past year, has rendered that word too monotonous, then follow the *News* and call it "The Association of American Clinicians and Pathologists," or even "The Association of Medical Experts;" something, at least, that will surely prevent so distinguished a body from being confounded with the great body of American practitioners. We trust when the members come together again next June they will lay aside that modesty so natural to men of true science, and not only correct the present error, but if they meet there in the Capital of the Nation all the other specialist organizations to form a Confederated Congress, do not permit the repetition of a similar mistake by calling it "The Congress of American Physicians and Surgeons," as has been proposed, and which would suggest to all the outside world only a gathering of ordinary members of the profession, but insist boldly on its being called honestly and plainly "The Congress of American Specialists." For it would be a sad reflection if, after assembling annually on the banks of the Potomac and enduring a June sweat for a decade, they found themselves wellnigh forgotten, and all for the want of a title sufficiently distinctive to secure the attention of the learned in all parts of the world. Let no one suppose that the foregoing comments are prompted by any feeling of opposition to the new Association. We are perfectly willing that both specialism and exclusiveism shall have fair play and an open field, but it is no more than right to claim that every ship should sail under its own flag.

A NEW WORK ON RENAL DISEASES.

The want of a good American work on renal diseases has long been felt. The average American physician is not usually an enthusiast in matters of pathology unless there be with it a judicious combination of practical therapeutics. And it may be said that renal diseases are the *bêtes noires* of physicians. Reference to the existing works on the subject will show that the subject seems to be in a sad, if not positively unintelligible tangle; and readers have often turned from the subject in despair, wondering why authors cannot agree, at least in the matter of nomenclature. And this has not been the whole grievance of the reader. He has read pages of partly unintelligible pathology only to find a few lines of the most general treatment—or to find that the treatment advised was contradicted by the pathology just read. But since the appearance of Ralfe's excellent work on "Diseases of the Kidneys, and Urinary Derangements," of Tyson's second edition of his "Practical Examination of Urine," and, lastly, of the work which is named below the physician may, for all practical purposes, discard other works of this character.

"Bright's Disease and Allied Affections of the Kidneys," by DR. CHARLES W. PURDY, of Chicago, is the most recent contribution to the literature of renal diseases. Physicians and pathologists will congratulate themselves and the author that he has published a work in which the anatomical divisions of nephritis, so incorrect and misleading, have been discarded. To those who do not know the author of this work, it will be a sufficient introduction to say that much of his special pathological investigation for this work was done in the Pathological Laboratory of the University of Aberdeen, with the aid of Prof. D. J. Hamilton. With one exception all the illustrations, which are excellent in every respect, are original. If there be any chapters in the book which are more especially worthy of notice, they are the chapters on "Scarlatinal Nephritis," and "Puerperal Nephritis." Scarlatinal nephritis has received more obscure treatment, and less treatment, at the hands

of authors than any other affection dependent upon renal changes, and Dr. Purdy has greatly cleared up the subject. On laying aside the book the reader will only regret that its scope is not greater; but as it is, it may be considered the best work of its kind that has ever been brought out in America.

AMERICAN MEDICAL ASSOCIATION.—All membership dues should be sent direct to the Treasurer, RICHARD J. DUNGLISON, M.D., lock box 1274, Philadelphia, Penn.

SOCIETY PROCEEDINGS.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

First Meeting, held in the Army Medical Museum, Washington, June 17 and 18, 1886.

THURSDAY, JUNE 17.—FIRST DAY.

The meeting was called to order by the PRESIDENT, DR. FRANCIS DELAFIELD, of New York.

The original members of the Association number seventy-five, the majority of whom were present. Of the 75 members 16 are from Philadelphia,[1] 16 from New York, 11 from Boston, 3 from Montreal, 6 from Baltimore, 2 from Washington, 2 from Cincinnati, 2 from St. Louis, 1 from South Carolina, 2 from Chicago, 2 from Albany, N. Y., 2 from U. S. Army, 2 from New Orleans, 1 from Colorado, 1 from Connecticut, 1 from Maine, 1 from Pennsylvania, 1 from Massachusetts, and 2 from New York State.

DR. FRANCIS DELAFIELD then delivered the

PRESIDENT'S ADDRESS.

He said: At the inauguration of a new Medical Association, it would seem proper for the presiding officer to say some words concerning the objects of the Association and the best methods of carrying these objects into effect. It was my intention to do this, but when I considered the character and attainments of those whom I was about to address, such a plan seemed to me unnecessary and even impertinent. We all of us know why we are assembled here to-day. It is because we want an Association in which there will be no medical politics, and no medical ethics; an Association in which no one will care who are the officers and who are not; in which we shall not ask from what part of the country a man comes, but whether he has done good work and will do more; whether he has something to say worth hearing and can say it. We want an Association composed of members, each one of whom is able to contribute something real to the common stock of knowledge; and where he who reads such a contribution, feels sure of a discriminating audience.

We are all busy men, working men, ambitious men. We all like to give instruction and gain reputation, and both of these we can do in the societies already existing, but we also want a society in which we can *learn* something. And this, I take it, is the real object of the enterprise which we inaugurate to-day to form an "Association of Physicians and Pathologists," to which we may come year after year with the well founded hope that at each meeting we shall find something to *learn*.

Without further preface I shall ask your attention to a subject of much practical importance:

CHRONIC CATARRHAL GASTRITIS.

The fact that the lining membrane of the stomach is both a mucous membrane and an organ of digestion does, in a measure, confuse our appreciation of the inflammation of this membrane. We are apt to notice especially the disturbances of digestion and to include all the cases in the general class of gastric dyspepsia. But the lining membrane of the stomach, is in part, a mucous membrane. It is frequently the seat of chronic catarrhal inflammation, and it then behaved as do the other mucous membranes under the same circumstances.

The Lesions.—Whether we consider the cases which are found at autopsy in the hospital dead-house, or the cases seen during life in private practice, it is evident that in the majority of persons, the inflammation goes no further than to affect the function of the mucous glands. They constantly produce a thick tenacious mucus which adheres in a thick layer to the surface of the mucous membrane. Less frequently the mucus is thin fluid and is vomited. With such a change in the mucous glands, the peptic glands may also give evidence of disordered function, but it is important to remember that unimpaired gastric digestion is perfectly compatible with chronic catarrhal gastritis. Anatomically, in such a gastritis, the only changes which we find are an increased quantity of mucus, sometimes congestion of the blood vessels, sometimes pigmentation, an enlargement of the mucous glands, some swelling of the stroma with a little infiltration of pus-cells.

Less frequently we find more advanced changes. The connective tissues between and beneath the mucous and peptic tubules is increased in quantity, and the tubules deformed and destroyed. The stomach may be contracted or dilated. Or without any increase of connective tissue, the walls of the stomach may be relaxed and its cavity dilated.

First among the symptoms, comes pain varying from a mere feeling of oppression or discomfort to the most severe and agonizing pain. Most common is the feeling of uneasiness or discomfort, either following the ingestion of food, or occurring when the stomach is empty. It is not always easy to distinguish this from pain belonging to the small intestine or to the colon. Much worse is the severe pain, due in some cases, to the presence of food in the stomach; a pain which is often followed by vomiting. At first, it only comes on when the stomach contains a considerable quantity of food, but later continuing even after repeated vomiting so long as the smallest fragment is left. A pain so severe, that the unfortunate sufferer has no rest by day or by night, deprives himself of almost all nourishment and finally falls a victim to the opium habit.

[1] One of these is in the U. S. Marine Hospital Service.

Nausea and vomiting are also regular symptoms. The nausea belongs to the early morning hours. The vomiting is most frequently a vomiting of food either in considerable quantities, or vomiting kept up so long as the smallest particle of food is left in the stomach. In other cases, large quantities of brownish fluid, mixed with mucus and food accumulate in the stomach and are vomited from time to time. This is especially the case, when the stomach is dilated. Vomiting of pure mucus is seen in a few cases. Vomiting of blood, usually not in large quantities may occur. Regurgitation of acid fluid in the morning especially belongs to alcoholic gastritis.

Retention and fermentation of the food in the stomach are most common with the dilated stomachs, but are by no means confined to them. They are found often enough in other cases of chronic gastritis. Constipation seems in some cases to depend directly upon the gastritis and will disappear as this improves without the use of any laxatives. In the same way, there are diarrhœas which can be cured by treatment directed to the stomach.

Headache is a symptom. It may follow a variety of types, but perhaps the most common is that which comes on at intervals.

A general loss of health, of which emaciation and loss of muscular strength are the most prominent features, is found with the worst cases of the disease. Inflammation of the tongue and a variety of abnormal sensations referred to the throat, mouth and tongue, belong to some of the cases.

The course of the disease is naturally prolonged over many years, and interrupted by periods of improvement. The symptoms come on in attacks, at first not severe, not of long duration, easily relieved in a variety of ways. As the disease continues, each succeeding year marks a greater severity and longer duration of the symptoms. In some of the patients, the disease never advances further than to make them uncomfortable during a part of each year. In others, the general health is disturbed, they are unable to work, and become miserable, chronic invalids. In others, the excessive pain drives them into the morphine habit. In a few cases, the gastritis causes death.

In attempting to establish a satisfactory treatment for chronic gastritis, it is important to state as clearly as possible the problem to be solved. First, we must remember that all patients who suffer from gastric symptoms, do not necessarily have chronic gastritis. Besides those who have functional disturbances of the stomach, or cancer or ulcer of the stomach, we find many others, in whom gastric symptoms are due to diseases or other parts of the body. Anæmia, uterine disease, the neurotic and hysterical condition and constipation often behave in this way. In old people the function of gastric digestion is often impaired simply as a result of old age. To each one of these conditions belongs its appropriate treatment, but it is not the treatment of chronic gastritis.

Still further, we must remember that in many cases of gastritis, paliation of the symptoms is all that we can hope for. This is true of the gastritis associated with heart disease, emphysema, phthisis, cirrhosis, Bright's disease, gout, rheumatism and alcoholism. It is also true of the cases in which the inflammation has gone on to the destruction of the peptic and mucus glands. After excluding all of these there remains a large and important group of cases of chronic catarrhal gastritis, in which we may hope not only to alleviate the symptoms, but to cure the disease.

It is evident from the nature of the disease that any treatment intended not merely to palliate, but to cure must be of long duration, and that it must be repeated from time to time when the inevitable relapses occur. The different plans of treatment which may be adopted are: 1, the curative treatment of climate and mode of life; 2, the regulation of the diet; 3, the administration of drugs, and 4, the use of local applications directly to the inflamed membrane.

I believe climate and mode of life offer the most certain means of curing chronic gastritis. It is unnecessary to lay down rules as to the sort of climate. The two points of importance are, first, the locality selected must be one where the patient can live an out of door life, and second, the patient must live in this climate, either for several years or for a considerable part of each year. Excellent as this method of treatment is, it is evident that it can be carried out only by a limited number of persons. The regulation of the diet is a matter which demands consideration in every case of chronic gastritis. In trying to ascertain the best way of feeding these patients, I have found only one satisfactory method, and that is to feed them experimentally with different articles of food, and then after an interval of several hours, wash out the stomach and see how thoroughly these articles of food, have been digested and removed from the stomach. After pursuing this course for a number of years, I have arrived at the following conclusions:

It is necessary that the patients should be well fed, a starvation diet never answers.

The stomach does not require any rest from the performance of stomach digestion, on the contrary, it is all the better for being called upon to perform its natural function.

The patients' own ideas as to what agrees with them are usually erroneous. They are apt either to starve themselves or to select the least nutritious articles of food.

The use of artificially digested foods, or of substances such as pepsin to assist stomachic digestion, is unnecessary.

The starches, oatmeal, cornmeal, bread, the cereals, the health foods are as a rule, bad. Portions of them remain undigested in the stomach for many hours.

Milk in adults is an uncertain article. It answers very well for some persons, not at all for others.

Meat is usually readily and well digested, but there are occasional exceptions to this rule.

Vegetables and fruits can be eaten, but the varieties must be selected experimentally for each patient.

I do not believe that any case of chronic gastritis is to be cured by diet alone. Even the exclusive milk diet while it often relieves symptoms is, as a rule, only temporary in its effect, so that the patient simply loses a certain amount of time by employing this instead of more efficacious plans of treatment.

The advantageous use of drugs belongs to the earlier stages of chronic gastritis. At that time they often palliate symptoms, and sometimes even seem to cure the inflammation. In the later stages of the disease their use becomes more and more unavailing. Yet the reliable drugs for this purpose are not numerous: The preparations of soda, potash and bismuth, the mineral acids, glycerine, sometimes carbolic acid, sometimes iodoform, sometimes the bitter infusions. If none of these answer, it is hardly worth while to look any further. If we can combine, with the administration of drugs the regulation of the diet and of the mode of life of the patient, then of course, our chances of success are much greater.

The use of local applications made directly to the mucous membrane of the stomach. This I regard as the most efficacious plan of treatment for those patients who are not able to leave home and seek a proper climate, but ask to be relieved without interruption to their ordinary pursuits. The local applications are readily made by the introduction of a soft rubber tube through the oesophagus into the stomach. Liquid applications are the best. They should be made in such quantities as to come thoroughly into contact with the entire surface of the mucous membrane, although the pyloric end of the stomach is the region where the inflammations is principally situated. They should be made at a time long enough after eating for the stomach to be as nearly empty as possible. For many cases warm water alone in considerable quantities is the only local application needed. In some, however, there is an advantage in medicating the water and for this purpose I employ a variety of substances. The alkalies, the mineral acids, bismuth, carbolic acid, the salicylates, iodoform, belladonna, ipecac, gelsemium, may each one be employed according to the particular case.

For the first week it is often necessary to put the patient on a milk diet, and this can be done even with those patients who, under ordinary circumstances, cannot take milk at all. Then after a time, to the milk we add one solid meal composed of meat alone. Next this single meal is increased by the gradual addition of fruits, vegetables, and bread. Then comes the giving of two solid meals a day, instead of one; then three solid meals, and now we get rid of the milk, in part or altogether.

For the first week of this treatment it is wise not to expect any special improvement. Indeed, even a longer time than this may try the perseverance of the physician and the confidence of the patient. Sooner or later, however, the expected improvement begins; the nausea and vomiting cease, the constipation or diarrhœa is improved, the flatulence is no longer troublesome, the headache becomes less frequent, and of more real value than these, the improvement in the general condition of the patient becomes evident. The color, the weight, the appetite, the sleep, the spirits of the patient, all show a change for the better. Of all the symptoms, the pain is the one which is apt to persist the longest.

For two or three months the patient has to be kept under observation, and the applications to the stomach made by the physician. After this the patient is dismissed, but continues the treatment himself, first every other day, then twice a week, then once a week for several months. The regular relapses of the disease are managed in the same way, but are much more quickly relieved.

I have tried thus succinctly to lay before you the characteristics of a common and important disease, and yet a disease which seems to me not to meet the recognition and attention which it demands. If I can secure for the patients who are made miserable by it a more careful and intelligent management than they are now apt to receive, the purpose of this paper will be answered.

The Committee on Permanent Organization reported a

CONSTITUTION AND BY-LAWS,

which after several amendments, were adopted. The main provisions of the constitution are:

That the Association has for its object the advancement of scientific and practical medicine. It shall be known as the "Association of American Physicians," and shall hold its annual meeting in the month of June in the city of Washington, D. C.

That the proceedings shall consist of discussions on subjects of general interest in the departments of medicine and pathology; of original communications and of demonstrations of gross and microscopic preparations, of apparatus, and of instruments.

That there shall be members and honorary members. The number of members shall be limited to one hundred. Physicians of sufficient eminence to merit the distinction may, to a number not exceeding twenty-five, be elected honorary members, and as such shall be entitled to attend all meetings and take part in the proceedings, but not to vote upon business questions.

That nominations for membership shall be signed by two members, be referred to the censors, and be acted upon at the succeeding meeting.

The following nominating committee was then appointed, to report on Friday morning: Drs. James Tyson, A. Brayton Ball, George B. Shattuck, Frank Donaldson, and Hosmer A. Johnson.

DRS. S. WEIR MITCHELL and MORRIS J. LEWIS, of Philadelphia, read a paper on

TENDON-JERK AND MUSCLE-JERK IN DISEASE, ESPECIALLY WITH REFERENCE TO POSTERIOR SCLEROSIS OF THE SPINAL COLUMN.

The investigators believed that by their work had increased the knowledge of the symptomatology of this affection. It was stated that while a muscle or a nerve may be excited by both electrical and mechanical irritation, the former is to be regarded as a ruder agent than mechanical stimulus. In some cases electricity is inapplicable beyond a certain extent. It was held that the knee phenomena were a direct muscular response and not due to reflex action. The most delicate test for determining the condition of the muscle is by striking the stretched tendon. This can be done in various situations, as at the knee, ankle, elbow, and jaw. Every distant muscular exertion, such as winking, if accurately

timed, exaggerates these phenomena. To demonstrate this, the patient should lie down with the knee slightly bent. At the time that the tendon is tapped, or just before, the patient is directed to wink, and it will be noticed that the jerk is much increased. This is more beautifully shown in the act of phonation, the patient being directed to count strongly, bringing the whole chest into play at the time the test is applied. A decided sensation, such as heat, cold, or an injury, will increase the responsive power of the muscle or tendon which has been struck. Both the tendon and the muscle jerk are reinforced by irritation of distant parts. This reinforcement disappears when the muscles are cut off from the spinal centres.

A blow on the muscle causes the muscle-jerk to extend up and down, but not transversely. In some cases of disease this jerk is irregular. In addition to this contraction, the muscles may form a little eminence or mound, which disappears slowly. Late in ataxia this is unusually well marked. It is also observable in some healthy muscles.

The phenomena of reinforcement was attributed to an increase of tone in the muscle as a result of the distant irritation.

A tabular statement was then presented giving the results of observation in twenty-three cases of locomotor ataxia. In this table the various symptoms and signs presented were represented by signs. In this way the history of each case could be seen at a glance.

In selecting a decisive symptom by which to arrange the cases into classes, station, or the ability to stand, was selected. This can be accurately estimated by having the wall back of the patient ruled in inches. The examiner takes his place in front of the patient and directs the patient to keep his eye on a particular spot above the head of the observer. It is then noted how much he varies laterally with his eyes open. He is then turned so that the anterior posterior sway may be noted. The examination is then made while the patient has his eyes closed. Numerous examinations made by Dr. Guy Hinsdale show that the normal man does not sway over one-half inch laterally, and not over three-fourths of an inch in the anterior posterior direction. The normal man sways forwards first, and first to the right. When the sway is more than three-fourths of an inch in the lateral direction, or more than one inch in the antero-posterior direction, the case should be looked upon with suspicion, as indicating that the general health is disturbed, or that there is some disease interfering with the maintenance of the equilibrium. The cases were divided into four classes. 1. Those in which station was normal. 2. Those in which it was slightly impaired. 3. Those in which it was greatly impaired, and 4. The paralytic cases. In the cases examined the knee and ankle jerks and their reinforcement were absent at the time when the cases came under observation. The changes in the arm jerk seem to advance in the same way as the leg jerks, although they come on later. In the paralytic stage the muscle jerk is increased, although the reinforcement is absent. In the first stage of locomotor ataxia the tendon jerk is diminished or absent, while the reinforcement is fair. In the subsequent stages both the tendon jerk and its reinforcement are absent. The muscle jerk and its reinforcement continue normal through the first two stages. In the third stage, while the muscle jerk is normal, the reinforcement is absent. In the fourth stage the muscle jerk is increased while the reinforcement is absent. In the fifth stage the muscle jerk is diminished and the reinforcement is absent. In the sixth stage both the muscular jerk and the reinforcement are absent. The increase of the muscle jerk late in the disease may be due to some irritative changes in the muscle, but this has not been positively determined.

In regard to associated movements, in a certain proportion of cases, if the patient is directed to shut his right hand, the left hand will also shut to a certain extent, and if the patient is sitting down, the leg may be drawn up. This condition may become more marked as the ataxic condition has increased. Another symptom referred to, and which was considered a new symptom, was prominence of the eyeballs. While the condition is not as marked as in exophthalmic goitre, it is sufficiently distinct to be apparent if attention has been called to the matter.

Dr. E. C. Seguin, of New York, suggested another possible explanation for the phenomena of reinforcement: that when the patient performs some movement, or when his attention is attracted by excitation of a sensory nerve, the cerebral inhibitory influence over the spinal cord is momentarily reduced and the reflex powers are raised for the moment. The reinforcement seems to be rather a negative condition.

Dr. James J. Putnam, of Boston, agreed with Dr. Seguin as to the possible explanation of the phenomenon of reinforcement. It seemed to him a mere matter of words whether we consider this due to withdrawal of influence from above or to an increase in the tonus of the muscle.

Dr. H. C. Wood, of Philadelphia, thought that this was more than a matter of words. The explanation of the knee jerk is based on physiological ideas. There are three classes of movements: the voluntary, the reflex, and movements originating in the muscle or in the nerve-endings in the muscle. Until the fact that the time of the knee jerk is so different from the time of the other reflexes is explained, we must admit that we have these three classes of movements. While it is possible that the movements in the muscle are the result of inhibition, we have at present no proof that such is the case.

Dr. F. Peyre Porcher, of Charleston, S. C., read a paper on

TYPHOID FEVER.

The author described a method of treatment which he considered very satisfactory. As in all cases of high temperature there is costiveness, the result of the arrest of the intestinal secretions, he recommended a mild laxative at the beginning of the treatment. Any laxative may be employed. The following combination is useful:

℞ Rhei pulv. ..... gr. ii–iv.
Magnesiæ ..... gr. x.
Hydrarg. chloridi mite. ..... gr. ss.–ii.

Sodii carbonatis..... gr. iv.
Pulv. ipecac..... gr. ¼.
M. Et. ft. pulv. No. I.
Sig. One powder every four or five hours as required.

In the treatment of typhoid fever, three things are to be considered: the necessity for maintaining the strength of the patient, the support of the system by the use of stimulants, and the morbid effect of high temperature. Special attention was directed to the latter element of the treatment. In reducing the temperature, the speaker had resorted to the use of ice-cold water, which was applied to the head, hands and arms by the use of towels wrung out of the water and reapplied as frequently as necessary. The applications are continued for ten to fifteen minutes, until the heat of the skin is reduced. The use of baths was considered objectionable on account of the difficulty of their application, and on account of the prejudice against them. He prescribes for internal use a fever mixture prepared somewhat as follows:

℞. Potassii acetatis..... ʒi.
Liquor amonii acetatis..... ʒi.
Spr. ætheris nitrosi..... ʒss.
Tinct. aconiti..... ʒss.
Aquæ ad..... ʒiv.
Sig. A dessertspoonful in a little water every two hours so long as the fever continues.

Morphia or the bromides may be added to the above preparation. It may also be employed in other fevers. Hot pediluvia may also be employed. In malarial cases, quinia and arsenic are employed. Later the mineral acids are added. With reference to the use of stimulants, these may be continued as long as the tongue is dry. Oil of turpentine is often called for on account of tympanitic distension of the abdomen. It is also of value as an astringent and as a general stimulant. The speaker had treated thirty cases in private practice in this manner. Three died. In these cases there were causes sufficient to explain the fatal termination.

DR. JAMES TYSON, of Philadelphia, described a case under his observation, in which, to reduce the temperature, he wrapped the patient in a sheet which was kept constantly wet with ice water. This was entirely successful. In this case both antipyrine and thallin were employed, but although they promptly reduced the temperature, it soon returned to its original position. When it is necessary to keep the temperature continuously reduced, he considered some modification of the cold pack is the best method.

DR. JAMES T. WHITTAKER, of Cincinnati, remarked that we should not lose sight of the possibility that the high temperature may be nature's way of getting rid of the poison. It has been found that the virulence of the typhoid fever bacillus can be reduced by heat. It is also possible that the changes formerly attributed to heat may be due to bacilli.

DR. E. DARWIN HUDSON, of New York, said that when he assumed his duties at the Bellevue Hospital, he found a simple and successful plan of treating typhoid fever in vogue. He was confident that under that treatment the successes among the poor pauper class of patients in that institution are greater than among the private practice of many physicians. The treatment is almost negative, consisting in sponging the patient every two hours during the continuance of the temperature above 102.5°, and adherence to an absolute milk diet. The only other measures employed are those directed to the relief of special symptoms occurring in the course of the disease.

DR. SAMUEL C. CHEW, of Baltimore, had employed with success quinia by hypodermic injection in order to reduce the temperature. It seems to have almost a specific action when used in this way. He used a solution of the hydrobromate, in which 20 minims represented 4 grains of the drug.

Dr. WILLIAM H. DRAPER, of New York, remarked that there is perhaps nothing more fallacious than statistics in typhoid fever. Cases of fever not truly typhoid are confounded with typhoid fever. All have seen cases in which there was a continued fever, but in which the temperature did not run the typical course. In such cases, we have no evidence that they are cases of typhoid fever. Experience shows that the value of antipyretic treatment in typhoid fever may be readily overestimated. In the majority of cases the value of antipyretics is not so much in reducing the mortality, as in affording comfort to the patient. That it does this, no one can doubt. The mortality of typhoid fever in the majority of cases depends upon conditions over which a reduction of the temperature would have no influence.

DR. WILLIAM PEPPER, of Philadelphia, said that we have statistics showing the normal course of typhoid fever, which would make us slow to accept a mortality of 15 or even 10 per cent. as evidence of much success. He thought it doubtful if the normal mortality would be over 15 per cent. under good nursing. Successes vary. He had treated a series of 104 cases without a single death, and again had treated twenty cases and lost five. It is evident that in typhoid fever we have different sorts of fevers, and a remedy applicable to one set of cases may not be to another. An excellent rate of mortality may be secured by absolute rest from the first moment of suspicion, and a rigid diet of milk or milk diluted. In addition he believed that the abstraction of heat is of great value. He thought that some remedy directed to the constant and important lesion of typhoid fever, aids in reducing the temperature. His own preference is for the salts of silver. If the case comes under observation early, is put at absolute rest, receives proper treatment, the mortality should not exceed 5 or 6 per cent. In private practice he believes that it can be kept down to this.

AFTERNOON SESSION.

The first business of the afternoon was the discussion of the question,

DOES THE PRESENT STATE OF KNOWLEDGE JUSTIFY A CLINICAL AND PATHOLOGICAL CORRELATION OF RHEUMATISM, GOUT, DIABETES AND CHRONIC BRIGHT'S DISEASE?

Referee, DR. JAMES TYSON, of Philadelphia.
Co-Referee, DR. WILLIAM H. DRAPER, of New York.

DR. TYSON, the *Referee*, began by defining the dis

eases included in the subject. The usual definitions of rheumatism and gout as general diseases with local expressions were given. Diabetes was subdivided into two varieties—the milder and the more severe form. The former consists essentially in a defect in that particular metabolic office of the liver by which glucose is converted into glycogen. It is due to over-stimulation of the liver cells by the excess of absorbed glucose arising from the habitual over-use of saccharine and starchy foods. The more severe form of diabetes may be termed neurogenous, and is caused by some direct or reflex influence on the vaso-motor centre, whence arises a hyperæmia and accelerated circulation through the liver, as the result of which the glucose absorbed during intestinal digestion is carried too rapidly through the liver to permit its conversion into glycogen. To this is added, in advanced stages, glycogen resulting from the splitting up of the products of digestion of nitrogenous foods.

Taking up the discussion, first as to rheumatism and gout, the referee called attention first to the difference in the morbid anatomy of the two diseases, in the absence of anything specific or peculiar in the changes in the joints in rheumatism, while in gout there is the peculiar deposit of sodium urate in the joints or their vicinity. The composition of the blood is definitely altered in gout by the almost constant presence of an excess of uric acid in combination with sodium, whereas no change of corresponding importance is found in the blood of rheumatism. Heredity plays a much more important *rôle* in gout than in rheumatism, reaching, in the former, according to various observers, 50 to 100 per cent., while in rheumatism the maximum claimed is 34 per cent. The early age at which rheumatism presents itself as compared with gout implies a difference in the etiology, as does also the absence of renal and the presence of cardiac complications. Alcoholic liquors and over-indulgence in food have no influence in the causation of articular rheumatism. In gout they are all-powerful.

The exciting cause of rheumatism is always cold, dampness, or both. The cause of the explosion or the acute attack of gout is the cause of the disease itself, and is due either to the over-accumulation of uric acid in the blood, whether as the result of increased formation or defective elimination, or to diminished power of resistance of the organism through some accidental cause, atmospheric or physical.

Moreover, except in the case of salicylic acid, which is admitted by all to be useful in both affections, Dr. Tyson thought that the treatment required by the two diseases was different. The treatment of gout is eliminative, that of rheumatism is restorative. It is true salicylic acid is efficient in both diseases, but this is not sufficient proof that they are the result of the same cause, so long as that cause is so easily demonstrated in one and not in the other. Nor is the case strengthened by the theoretical reasoning which so well explains the action of salicylic acid—that it prevents the formation of uric acid in the blood by seizing upon the glycocine out of which uric acid is formed.

The relation of gout to that form of chronic renal disease known as chronic interstitial nephritis is a true correlation, since there is every reason to believe that the cause of gout is one of the causes of this form of chronic renal disease, so common in gout, and the evidence of renal disease is often found long before the gout manifests itself.

To estimate the relation between gout and diabetes it is necessary to remember that there are the two forms referred to With neither of them is there any pathological relation. Between gout and the first or mild form of diabetes there is a clinical correlation, although many of the facts on which it has been founded the referee believed to be erroneous. Thus, although uric acid sediments are quite common in diabetes, yet careful quantitative analysis shows no increase in the amount of uric acid excreted. The uric acid sediments must therefore be the result of the excessive acidity so characteristic of diabetic urines, due to the fermentative processes.

Again, it is said the lithæmic urines often contain sugar. This he was confident was much rarer than is commonly supposed, because of the fact that uric acid reduces the salts of copper, and this reaction is mistaken for that of sugar. He thought that the inability of gouty persons to digest saccharine and starchy elements of food should not be regarded as a proof of clinical correlation, because it simply indicates a feeble converting power of the intestinal digestive fluids over the carbohydrates. In diabetes there is no defect of this kind. The carbohydrates are converted into glucose with facility. The trouble is with the liver, which is not able to reconvert the glucose into glycogen.

Between gout and the more severe form of diabetes, which is the result of disease at a point distant from the liver, there is no correlation either clinical or pathological.

Between diabetes and Bright's disease there is a relation of this kind. The effect of the circulation through the kidneys, surcharged with sugar alone, or with sugar, acetone and diacetic acid, is to irritate the renal cells and produce a degree of chronic parenchymatous nephritis instead of the interstitial nephritis which is so closely correlated with gout. From recent observations there is reason to believe that these changes take place in the kidney earlier than used to be supposed, and that albuminuria appears correspondingly early, either coincidently or in alternation with glycosuria. The difference between the relation of gout to Bright's disease and to the more severe or neurogenic diabetes, is that in the former that which causes the gout causes the Bright's disease, so that there is a true correlation; whereas in neurogenous diabetes, it is a result of the diabetes which causes the renal complication.

As to diabetes and rheumatism, the idea that these two diseases are closely correlated has apparently received substantial support from the results of treatment of the two diseases by salicylic acid. Occasional reports as to the efficiency of salicylic acid in diabetes have acquired additional impulse from views which have recently been promulgated by Latham, who concludes on clinical grounds that there are two

forms of diabetes, one due to neurotic disturbances of the function of the liver, and the other to neurotic disturbances of the functions of muscle. As the result of the latter, glucose is formed in the muscles and passes thence into the circulation. This latter is so closely related to rheumatism that one degree of oxidation develops the *materies morbi* of rheumatism, and another develops glucose. Having shown also by the same reasoning that the administration of salicylic acid arrests the formation of uric acid, lactic acid and glucose, he thus explains the usefulness of salicylic acid in some forms of diabetes, and says that in doses of from 10 to 20 grains three times a day, he has seen it produce marked improvement. More recently, Holden reports the successful treatment of six cases of diabetes with salicylic acid.

The referee, whose experience with salicylic acid in diabetes had not heretofore furnished satisfactory results, had not yet had the opportunity of applying this more recent principle, that it is in the cases with rheumatic pains that it is especially serviceable. He held that until more cases were collected in which this principle of treatment was applied, the question was not ripe for decision. In a single case which had come under his observation in which it was claimed that salicylic acid had been very useful, the sugar had been found increased rather than diminished.

DR. WM. H. DRAPER, the *Co-referee*, said: It is fair to presume that this question would not have been propounded if clinical experience did not suggest it. It certainly is not yet justified by the present state of knowledge in pathology. Although the question is premature from a physiological point of view, it can hardly be regarded as without interest and possibly importance from a clinical standpoint. It is from this latter aspect that my remarks shall be made.

By gout is meant, I take it for granted, not simply the arthritic malady, but a diathesis which manifests itself through more or less well-defined derangements of nutrition, which give rise to a variety of secondary cerebro-spinal irritations and provoke definite structural changes in the blood-vessels, in the connective tissue of the parenchymatous organs and in the nervous system.

By diabetes we are to understand, I suppose, the more common and lesser form of that disease. The term rheumatism is so vague in its ordinary application that it is not easy to exactly comprehend exactly what is meant in this question. It is presumed that it covers acute articular rheumatism and the subacute forms in which the differential diagnosis from subacute gout is so difficult.

The form of Bright's disease is probably the form of chronic diffuse nephritis which is characterized by extreme sclerotic changes in the connective tissues of the kidneys and in the arteries, and by cardiac hypertrophy.

I think that the experience of most clinical observers will justify the statement that gout, rheumatism, diabetes and chronic Bright's disease are frequently associated, sometimes in the same individual history; more frequently in the histories of families. The association of gout and even chronic rheumatism with chronic Bright's disease is very common in the individual, while the association of gout with diabetes or of diabetes with granular kidney, is not common. Chronic rheumatism may exist without even being complicated with gout or diabetes or chronic nephritis, but in families where the association of morbid phenomena can be traced, I think that it will be acknowledged that these diseases are frequently found in more or less marked alliance.

Granting this association, are there any facts to show their correlation? Are they reciprocal, interchangeable affections, transmutations of the same morbid process, and therefore recognizing a common determining cause as yet unknown?

The *first* fact that suggests the idea that they are cognate forms is that of heredity. First as to gout and diabetes. Glycosuria often recognizes a gouty ancestry, the term glycosuria being used to express the lighter form of the disease. In many cases the grave form of diabetes is not traceable to a gouty origin. The speaker had seen many cases leading him to believe that, excluding the cases of diabetes of nervous origin, careful investigation of the family history would reveal the presence of gout in the majority of cases. *Second*, concerning gout and rheumatism the fact of heredity as establishing a connecting link is not so evident, but it has been pointed out that articular rheumatism frequently occurs in the children of gouty parents. The influence of heredity in determining the association of the subacute form of rheumatism and gout cannot be positively decided.

Third, as to the frequent manifestation of heredity in the history of gout and interstitial nephritis, I think that there can be no question. This form of Bright's disease not only occurs as a complication of inherited articular gout, but is often observed in the members of gouty families who have themselves never exhibited any articular lesions. This is especially seen in the female line.

I wish next to call attention to the Association with these diseases of certain common derangements of nutrition. While it cannot be claimed that organic chemistry has as yet done more than formulate the general principles that gout and diabetes are associated with the signs of incomplete metamorphosis of the food elements, it is daily making progress in solving the complex processes by which each atom of carbonaceous and nitrogenous food is finally resolved into carbonic acid and urea. In these two diseases there is a diminished capacity for converting the carbohydrates. The occurrence of sugar in the urine of gouty persons is not infrequent, and of lithic acid deposits in the urine of diabetics is not infrequent.

Gout, diabetes and rheumatism in their treatment by medicines exhibit reciprocal relations. In these various affections the alkaline treatment is used with benefit. It is admitted that the value of the alkaline treatment in acute rheumatism is not sufficiently well established to justify the proposition that the disease is on that ground a correlation of gout. The value of salicyl compounds in the treatment of gout, diabetes and rheumatism suggests the idea that these diseases have something in common, either causal

or concomitant, which the preparations of salicylin antagonize.

The clinical observations which support the idea of a correlation of gout, diabetes, rheumatism and certain definite structural changes in the kidneys and blood-vessels, namely, the frequency of hereditary transmission in the same family and their occasional coexistence in the same individual, the common idiosyncrasy of a diminished capacity for the complete conversion of the carbo-hydrates and finally the common reactions which they exhibit to the same remedies, are of course open to criticism, but they nevertheless excite a reasonable suspicion that these diseases have at least certain common features which in all probability proceed from similar derangements of physiological functions.

This much it seems to me may be acknowledged even in the absence of any pathological evidence that these diseases are attended with any common structural lesions or specific functional disturbances. There are many unsolved problems in the pathology of gout, diabetes, and rheumatism, and the working hypotheses of the clinical observers in this field are being constantly unsettled by the revelation of the poysiological laboratory. It would seem, therefore, that the only conclusion we are at present justified in making as to the correlation of the diseases in question is this: clinically, they are often associated by hereditary transmission, by coexistence and alteration in the same individual, by presenting similar idiosyncracies in regard to the power of converting the carbo-hydrates and by being more or less successfully controlled by the same remedies; pathologically, they must still be regarded, in the absence of any demonstrable common determining cause, either functional or structural, as more or less distinct and specific diseases.

Dr. J. T. Dana, of Portland, Maine, said that it seemed to him that this discussion might properly have been extended a little so as to include rheumatoid arthritis. In this affection he thought that the differentiation of it from the other affections has been well made out. He asked if this disease did not require correlation with the others considered?

Dr. E. G. Janeway said that in considering the question of history we have to be careful in reading English writers. The English people all through are gouty. Any rheumatic tendency except in such individuals will not hold in other countries. We do not find the same correlation in America. His observation led him to believe that while members of the Hebrew race are very subject to diabetes, they do not have gout and rheumatism in the same proportion. With reference to the presence of albumen in the urine of diabetics, he had found that in many cases this was to be explained by the irritation of the urinary passages by the saccharine urine.

Dr. A. L. Loomis, of New York, held that from a pathological standpoint we can not at present regard these diseases as directly, at least, correlated, yet from a clinical standpoint there are many things which make it difficult for us to divest ourselves of the idea that there is a correlation in rheumatism, gout, diabetes, and chronic Bright's disease. These clinical phenomena are often so striking that one comes almost to regard these diseases as different manifestations of the same causes. He related the histories of some cases illustrating this point. The first was the case of a man of 63, who at the age of 42 had his first attack of gout. The urine was frequently examined at this period, and with negative results, presenting only a high specific gravity and nearly always an abundance of urates. In his 60th year, after a prolonged attack of gout, sugar appeared in the urine. From that time to the present he has not had an attack of gout. Sugar was presented until six months ago, when it disappeared, and now albumen is present. This change could not be accounted for by changes in habits or in diet. Two analogous cases were also reported. These cases are not unusual. It seemed to him that they compel us to take the position that while in their clinical phenomena they differ very markedly, still in their origin and development they seem to have many things in common; in other words, their correlation seems to be complete.

Dr. H. C. Wood had been led to conclude by his experience that gout and rheumatism were the same thing. He was unable to make the diagnosis between them. In the family of which he was a member the great grandfather was an Englishman and died of gout. The grandparents seem to have escaped, but the uncles and aunts almost without exception have died of gout. One brother has suffered with attacks of sub-acute rheumatism since the age of ten. Another brother has had six attacks of inflammatory rheumatism in as many years. Another brother went to the age of thirty years without any marked manifestation, when he had a severe attack of gout. Another brother has become almost a permanent cripple from inflammation of the muscles. He concluded it extraordinary if all this rheumatism and gout does not date back to one origin.

Dr. William Pepper said that the clinical evidences of the correlation of these diseases seems to be so great that we cannot safely disregard it. In considering such common diseases, we must of course exclude mere coincidence. Dr. Draper has done well in calling attention to gout as a constitutional affection. If we confined ourselves to the mere anthritic phenomena we should exclude the great proportion of cases of gout as we meet with it in this country, which are perhaps as well included under the head lithæmia as anything else. He agreed with Dr. Janeway in regard to the frequency of diabetes in the Jewish race, but he had also found such persons very subject to lithæmia. In all these cases the importance which a diminution of vital resistance of any particular part plays in the development of the local manifestations, must be remembered.

Dr. Dana has referred to rheumatoid arthritis. This appears to be the form in which the nervous element is most marked. All have seen cases in which rheumatoid arthritis has been preceded by influences acting directly upon the nervous system. When we consider the immense amount of nerve force required in co-ordinating the digestive processes of the stomach, liver and kidneys, and in superintending the

metabolism in the tissues, it seems clear that a depressed condition of the nervous system must play a large part in the production of these affections. In studying cases of these diseases we are usually able to obtain a history of some cause of depression of the nervous system, and this affords a powerful argument in favor of the correlation between these diseases.

In regard to treatment, he could give evidence in favor of the salicylic acid treatment in certain groups of diabetics. These have been cases of the milder type associated with rheumatoid and arthritic phenomena. In one case the diabetes has been apparently cured, the patient having returned to the use of carbo-hydrates. In this case albumen still persists. The explanation of Dr. Janeway as to the cause of the albuminuria does not hold good in many of these cases. The disappearance of the sugar is not always accompanied by a corresponding decrease in the quantity of albumen.

DR. A. JACOBI, of New York, remarked that there was one form of rheumatism not so well known as the forms described, that is, the rheumatism nodosus sometimes seen in young subjects. This nodus form of rheumatism shows itself by the appearance of small lumps varying from half a dozen to several dozen, appearing not infrequently about the tendons of the fingers. He had seen them about the fascia, particularly of the head. Examination of these lumps show them to be composed of hypertrophied connective tissue.

In regard to the connection between diabetes and gout, there are several forms of diabetes. The form particularly connected with gout is that due to disturbances of the nutritive processes, particularly that of the liver. This is the form in which the salicylates do good. Their action seemed to him to be due to the influence of this drug over the liver in increasing the quantity of bile and in liquefying it. It is therefore a powerful agent in diminishing the tendency to the formation of gall stones. The forms of glycosuria which come and go are usually benefited by salicylate of sodium. This form of diabetes is generally found in anæmic persons, often very fat, and not infrequently among women of the Jewish race.

In reference to Bright's disease, this is quite common at the age of forty or fifty years, when atheroma of the small arteries appears. At that time gout is also common, and the co-existence of the two does not necessarily indicate a common causation.

DR. WM. H. DRAPER, in closing the discussion, said that in the cases of rheumatoid arthritis where a reliable history could be obtained, he had, as a rule, found evidences of a gouty origin, referring to gout in its larger significance. In regard to gout, he was strongly inclined to believe that the presence of uric acid is only an epi-phenomenon, and that its presence in the joints is not absolutely essential to the occurrence of other true gouty lesions. In the diabetes of Jews, he had seen the same association of lithæmic conditions as in other races.

He agreed with Dr. Wood in regard to the difficulties of diagnosis. The practitioner can not always satisfy himself whether he is dealing with gout or rheumatism. The correlation of these diseases is to be made only from a clinical standpoint, and none can fail to recognize the frequent association of these diseases. Whether or not there is at the basis of all of them a similar pathological process is a question which has yet to be determined by pathological chemistry.

(To be concluded.)

FOREIGN CORRESPONDENCE

LETTER FROM LONDON.

[FROM OUR OWN CORRESPONDENT.]

Statue of Sir Erasmus Wilson—Death of Dr. Francis Mason and Mr. Wm. White Cooper—Influence of the Mind on the Body—Statistics of Pneumonia—The Hydrophobia Commission.

A bronze statue of the late Sir Erasmus Wilson, erected in the grounds of the Royal Sea Bathing Infirmary, Margate, has been unveiled in the presence of a distinguished assemblage. The statue was erected by Mr. Brock, A.R.A., and was presented to the Infirmary by Sir James Paget on behalf of Lady Wilson. Among those present were Mr. Swinburne, the President of the Royal College of Surgeons, Dr. Oliver Wendell Holmes, Sir Spencer Wells, Sir Travers Lawrence, etc. Sir James Paget, in making the presentation, said no place seemed more appropriate for it than Margate, for close by was the home in which Sir Erasmus spent the later years of his life, planned many of his kind deeds, and in which he died in peace and in fair renown among all men. His studies had made him skilful in discerning external forms of disease, and especially those forms which were characteristic of diseases of the skin. In this branch of practice he soon prospered and made a large fortune. But though he became rich he made his income fairly. He never extorted money, he never grasped at it, he never took it from the poor, neither did he ever pretend to more knowledge than he believed he had. He did not scatter his money broadcast in small sums among the needy. He gave it to charities of which he observed the merit and the need, or to the promotion of that knowledge in which he had been chiefly occupied. He gave £10,000 to the Aberdeen University, a similar amount was given by him in order to have the Egyptian obelisk brought to England; towards the Sea Bathing Infirmary he subscribed £30,000, and during his lifetime he had given away no less a sum than £100,000. The statue was then unveiled amid much cheering. It is a faithful portraiture of Sir Erasmus, who is represented as wearing his Presidential robes.

Two well-known lights of the medical world have been removed by death. In his forty-ninth year Dr. Francis Mason, one of the senior surgeons of St. Thomas's Hospital, for many years associated with the late Sir William Fergurson, author of a work on "Hare-lip and Cleft Palate," and inventor of several surgical instruments; and Mr. William White Cooper, the eminent oculist, Surgeon Oculist in Ordinary to the Queen, whom he had attended for upwards of thirty years, and whose intention to confer a knight-

hood on him was only recently mentioned. Mr. Cooper was ophthalmic surgeon to several important institutions, and besides contributing largely to the literature of ophthalmology, was co-editor of Professor Owen's Hunterian Lectures on Comparative Anatomy.

At the last meeting of the Regent's Park Athenæum Society a paper on "The Influence of the Mind on the Body" was contributed by Dr. Howard Battye. Of all the mysterious processes of the mind he thought fear and faith exerted the greatest influence on the body. Fear predisposed to disease, while the simple exercise of faith had been known to produce wonderful and well authenticated cures. The influence of mesmerism had been quite established, but it was not advisable for medical men to import it into their practice, though the force might with advantage be employed in cases of nervous debility and sleeplessness. So-called hereditary consumption was often excited by nervous apprehension. In the course of the discussion which followed the reading of the paper Dr. Gutteridge, the chairman, said he had known cases of small-pox, scarlatina, and other infectious diseases originating solely through dread of the contagion. In one case a woman contracted small-pox by merely looking through a window at a passer-by who was suffering from the malady. Epidemics always subsided as soon as they could eliminate the element of fear.

A very good suggestion has been made by Mr. S. Yeldham of a plan for administering cod-liver oil to infants. He says: "Let the nurse dip the end of her little finger in the oil and put it into the child's mouth. This may be repeated five or six times in the twenty-four hours. In such small quantities, not only does it never disagree, but the child sucks it off the finger with avidity and evident pleasure. It may be administered in this way to the youngest infant." By this simple and inexpensive expedient, the writer says many infants, who were absolutely starving for want of natural foods, became fat and plump, and happily in an almost incredibly short spaceof time. The oil has the effect of enabling the child to digest other food which it could not retain on its stomach without it.

Dr. Angel Money has published some interesting statistics of pneumonia, with especial reference to the relations of delirium and temperature. The cases from which his deductions are drawn have occurred in University College Hospital during the past twelve years. From the author's investigations he had arrived at the same conclusions as Heinze had previously, viz.: that mere pyrexia had little to do in the production of delirium, but prolonged pyrexia and high transitory fever must exercise some direct and indirect deteriorating influence on the grey matter of the brain and spinal cord, and must therefore predispose to delirium and other signs of exhaustion of nervous matter. Of seventeen available cases, sometimes the delirium coincided with the greatest rise in temperature, rarely it preceded the acme of fever, and most frequently the delirium came on with the fall of temperature. Heinze drew attention to the much greater frequency of delirium or marked mental change in pneumonia of the upper lobe. Taking additional precautions by employing only the cases in which the pneumonia was limited to the upper lobes, Dr. Money's observations confirmed this statement; and he suggested that the influence of a local inflammation on the cervical sympathetic, which controlled the calibre of the cephalic and cerebral vessels, might possibly have something to say in the matter. From an examination of other tables, it seemed clear that the presence or absence of delirium exerted no influence on the mortality. It seemed, however, that the third decade of life, when the temperature went beyond 104°, seemed to be the most fertile in the production of delirium; but it was pointed out that this age and this degree of fever yielded the largest number of cases of pneumonia.

A preliminary meeting of the Royal Commission appointed to report on M. Pasteur's method of preventing the development of hydrophobia in persons bitten by rabid dogs, was held recently at the house of Sir James Paget, in Hanover Square.

G. O. M.

DOMESTIC CORRESPONDENCE

THE ASSOCIATION OF AMERICAN PHYSICIANS.

To the Editor of the Journal:

Dear Sir:—The readers of The Journal will doubtless observe many familiar names in reading the proceedings of the first meeting of "The Association of American Physicians;" some who took an active part with the Original Committee of Seven of the American Medical Association in regard to the International Medical Congress to meet in this country in 1887, and some who took an active part against the Committee when it was enlarged. It may be asked, what means this multiplication of medical associations, and what is the necessity for them? In this case the answer is obvious. In reply I would answer the last question first—that there is apparently no necessity for them; and the reply to the first is, it means a bold and aggressive attack. The animus of this new association is open and apparent, for it is evidently organized ulteriorly in opposition to the American Medical Association, and is intended eventually, with kindred associations—the Surgical, the Gynecological, Laryngological, Ophthalmological, etc., to absorb that Association or destroy it, or its influence for usefulness, framing their organization in such a way as to keep out all who may be obnoxious to it in any way, and constituting *itself* the representative body of the medical profession in the United States. That seems to be the end in view.

But by what right can a hundred medical men or any other special number associate themselves together and call themselves "*The* Association of American Physicians? If they had called it "*An* Association of American Physicians," associated for a specific purpose, and limited to that object, it would not look so badly and no especial criticism or objection could be made against it, though exclusiveism is against the spirit of science and its pursuit. Any

one has a right to be heard in prosecuting any of its branches, and no one can dictate to, or obstruct him in its development and promulgation. Knowledge is too widespread and its votaries are too numerous and universal to be hindered on their way in this period of the nineteenth century. But as this new association places itself before the public I do not hesitate to say that its projection is an insult to the rest of the medical profession in the United States, whose standing in every respect equals its members; and besides this, the character and intentions of this new association show a tendency to form a class relation which is altogether foreign to the intent and meaning of the Government under which we live.

But there is another aspect of the matter which comes home to the heart of every physician who regards the reputation of his country, in at least a practical point of view, as of paramount importance; and that is the strong contrast that will be attempted to be made between this new organization and the American Medical Association in the eyes of the medical world, especially in the eyes of our foreign medical brethren who may favor us with a visit at the International Medical Congress, and those also who decline to do so, because of the assumed distiveness which it proposes to set up. Is the American Medical Association and the medical profession to be degraded by a set of men in its own ranks, in a profession which teaches and has always taught fraternity of feeling, and goodwill towards its fellows? Or do they intend to degrade themselves and their co-workers necessarily by breaking up the profession into little fragments, thereby producing such discord that the way may be opened to let in our enemies to destroy the traditions of medicine handed down to us through so many centuries. Can they be satisfied to sever the chain that has joined the far past with the present, and destroy the line and pathway by which medicine has reached its present eminence? And yet such seems to be the very object in view, and the animus of such organizations.

The day will come when such as seek to destroy the great temple of medicine in such ways—by caprice and whims and spitefulness—will wofully repent it, will abhor themselves sooner or later and be ashamed of their associates who, with themselves, lifted a hand or voice to aid in such nefarious work.

PRACTITIONER.

Washington, D. C., June 24, 1886.

BOOK REVIEWS.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WILLIAM PEPPER, M.D., LL.D., etc. Assisted by LOUIS STARR, M.D., etc. Volume IV. Diseases of the Genito-Urinary and Cutaneous Systems—Medical Ophthalmology and Otology. 34 Illustrations. 8vo., pp. 877. Philadelphia: Lea Brothers & Co. 1886.

The great "System of Medicine," ably edited by Dr. Pepper, and so ably written by his colleagues, is now almost completed; within a short time the fifth and last volume will be before the public. If the fifth volume be as well written as the first four surely the highest expectations of the editor and his colleagues will be more than realized.

The two chapters on "Diseases of the Kidneys" are contributed by Dr. Robert T. Edes, of Boston, and Dr. Francis Delafield, of New York. Dr. James Tyson then contributes two chapters on "Hæmaturia and Hæmatinuria, and on Chyluria." These, with two chapters on "Diseases of the Male Bladder," by Dr. Keyes, and on "Seminal Incontinence," by Dr. S. W. Gross, bring us to the gynecological portion of the volume, which includes chapters on "Displacements of the Uterus," by Dr. E. C. Dudley, of Chicago, "Disorders of the Uterine Functions, including Amenorrhœa, Dysmenorrhœa, and Menorrhagia," by J. C. Reeve, M.D., "Inflammation of the Pelvic Cellular Tissue and Pelvic Peritoneum," by Dr. B. F. Baer, of Philadelphia, "Pelvic Hæmatocele," by Dr. Thomas, "Fibrous Tumors of the Uterus," Sarcoma of the Uterus," and "Carcinoma or Cancer of the Uterus, by Dr. W. H. Byford, "Diseases of the Ovaries and Oviducts," by Dr. Goodell, "Diseases of the Urinary Organs in Women," by Dr. A. J. C. Skene, "Diseases of the Vagina and Vulva," by Dr. Edward W. Jenks, of Detroit, "Disorders of Pregnancy," by DR. W. W. Jaggard, of Chicago, who also contributes the articles on "Functional Disorders in Connection with the Menopause," and "Diseases of the Parenchyma of the Uterus; Metritis and Endometritis, including Leucorrhœa," and "Abortion," by Dr. George J. Engelmann, of St. Louis.

It might seem invidious to select any of the gynecological articles and say that it is the best; but it is particularly noticeable that the articles written by the younger authors are not less readable or valuable than those by writers of wider reputation; and certainly one could not wish better articles than those on "Disorders of Pregnancy," and "Abortion."

"Diseases of the Muscular System" are included in this volume, though more properly belonging to nervous diseases. Under this head are three articles, "Myalgia," by Dr. James C. Wilson, of Philadelphia, "Progressive Muscular Atrophy," by Dr. Tyson, and "Pseudo-hypertrophic Paralysis," by Mary Putnam Jacobi, M.D. The section on "Diseases of the Skin" is written by Dr. Duhring and Dr. Stelwagon, of Philadelphia, that on "Medical Ophthalmology," by Dr. Wm. F. Norris, of Philadelphia, and that on "Medical Otology" by Dr. George Strawbridge, of Philadelphia.

It is a noticeable and somewhat remarkable fact that six of twenty-one contributors to this volume are residents of the West; a fact which seems to show that while some of his *confrères* assert that all the medical talent of the country is confined to Philadelphia (and New York and Boston by courtesy), the Editor of the "American System" does not quite believe it.

A MANUAL OF SURGERY. In Treatises by Various Authors. In three volumes edited by FREDERICK TREVES, F. R. C. S., Surgeon to and Lecturer on Anatomy at the London Hospital. Volume I,

General Surgical Affections, The Blood-vessels, The Nerves, The Skin. Vol. II, The Thorax, The Organs of Digestion, The Genito-Urinary Organs. Vol. III, The Organs of Locomotion and of Special Sense, The Respiratory Passages, The Head, The Spine. Duodecimos, 1866 pages, 213 engravings. Per volume, cloth, $2. Philadelphia: Lea Brothers & Co. 1886. Chicago: A. C. McClurg & Co.

The three volumes of which this Manual is composed are concerned mainly with the clinical, diagnostic, and therapeutic aspects of surgery. The general principles of operative surgery are dealt with, but the technical details of the various procedures are omitted, with the exception of such as concern what may be termed special operations, as tracheotomy, gastrotomy, nephrectomy, ovariotomy and the like. Pathology is discussed only in so far as it directly affects the clinical phases and the intelligent treatment of disease.

The editor of this Manual, though young, has made a name for himself as a surgeon of rare ability, and when one finds connected with his name those of John Chiene, A. J. Pepper, Malcolm Morris, Mansell Moullin, Pearce Gould, Frederick Eve, H. T. Butlin, John Duncan, Jonathan Hutchinson, Herbert W. Page, Greig Smith, Mitchell Banks, Harrison Cripps, Sir William MacCormac, Fourneaux Jordan, and others, he must feel convinced at the outset that though the work may be small it represents the best surgical knowledge of England, and will be a welcome addition to the library of the American surgeon. Each volume is indexed separately.

A Compend of Pharmacy. By F. E. Stewart, M.D., Ph.G., Lecturer on, and Demonstrator of Pharmacology in the Medico-Chirurgical College of Philadelphia, etc., etc. Based upon Prof. Joseph P. Remington's "Text-book of Pharmacy." Sm. 8vo., pp. viii—196. Philadelphia: P. Blakiston, Son & Co. 1886. Chicago: W. T. Keener.

This book is No 11 of the Quiz-compend series, issued by the publisher. It shows evidence of great care in its preparation, and will be of service not only to the student, but to the recent graduate in Pharmacy, and to the physician who has to prepare his own drugs or prescriptions. It contains a list of officinal preparations, and lists of the preparations of the inorganic and organic materia medica, with directions.

MISCELLANEOUS.

Preventive Inoculation in Yellow Fever.—The subject of inoculation for yellow fever, as practised by Dr. Domingos Freire, of Rio de Janeiro, was brought under the Société de Biologie of Paris at its last meeting. M. Rebourgeon communicated the results obtained by himself and Dr. Freire in December, 1885, and January and February, 1886. The weather during these months in Brazil was intensely hot, and yellow fever prevailed severely. Of 3051 subjects inoculated at Rio not one had died, whereas in the same districts and houses 278 non-vaccinated had succumbed to the disease. The number of the inoculated has now reached 6000, and not one of them has been attacked with the fever; and, what is more remarkable, severe cases inoculated in the second stage of the disease had all recovered. In reply to M. Brown-Séquard, M. Rebourgeon said that but few foreigners were inoculated, but yellow fever is at the present time creating great ravages among the Brazilians and mulattoes; the negroes even are being largely attacked, which is a rare occurrence; and the area of the disease was extending inland from the littoral. He explained that some specimens of virus sent two years ago to M. Cornil, and found by him to be worthless, had not been sent by Dr. Freire, but by opponents to his method. He had often inoculated himself, and was so convinced of the efficacy of the attenuated virus that he had frequently offered to undergo inoculation with the yellow fever itself. He presented a specimen of the vaccine to the Society for examination. In reply to M. Maurel, he said that he had met with yellow fever at an altitude of more than 700 metres, and had seen many cases among emancipated negroes, although less than among mulattoes, who were attacked in about the same proportion as the whites. M. Maurel attributed the former immunity of negroes to their vegetable diet, but since emancipation negroes had largely adopted the customs of the whites and consumed more animal food. A commission to study the method of inoculation was appointed, consisting of MM. Brown-Séquard, Cornil, Duval, Bourquelot, and Maurel.—*Lancet*, June 5, 1886.

Mississippi Valley (Formerly Tri-State) Medical Society.—The annual meeting will be held at Quincy, Ill., July 13, 14 and 15, 1886, at 10 A.M. Those in attendance will be returned over the railroads centering in Quincy for one-third fare, on the certificate of the Secretary of the Society; but to secure this reduction each person, on buying his ticket to Quincy, *must take the receipt of the local ticket agent for "full fare" over the roads named on the ticket.*

This is not a delegate society, but admits to membership—simply by registration—all practitioners in good and regular standing who may attend its meetings and wish to affiliate with it. A cordial invitation to be present is extended to all members of the profession.

Joseph Robbins, M.D.,
Chairman Com. of Arrangements.

The International Congress of Psychiatry and Neurology, and Mr. Clark Bell.—At a meeting of "The Society of Medical Jurisprudence and State Medicine, held at the Academy of Medicine, 12 West 31st Street, New York City, April 8th, 1886, the following preamble and resolutions were unanimously adopted:

Whereas: It appears from the minutes of the New York Neurological Society, that Clark Bell, Esq., sent a communication to an officer of that body,

which was submitted to the council of officers of the same body and by them to the Society; and

WHEREAS: The said Clark Bell, Esq., in the aforesaid communication represented that he acted as the American delegate of the International Congress of Psychiatry and Neuro-Pathology, the function of said International Congress of Psychiatry and Neuro-Pathology at Antwerp, being the selection of a proper classification of those disorders collectively designated as insanity; and

WHEREAS: All the European collaborators on this worthy undertaking are experienced alienists of high scientific repute, teachers at Universities or physicians engaged in the special treatment of nervous diseases; and

WHEREAS: The said Clark Bell, Esq., is singularly the only North American represented in the same undertaking; and

WHEREAS: It is highly desirable that the important branch of medical science, known as Psychiatry, which above all others is of common interest to the medical and legal professions, should, on so important an occasion as the international classification of its intricate subject matter, be represented worthily; and

WHEREAS: The said Clark Bell, Esq., is not an alienist, not even a physician; and

WHEREAS: As far as eminent Neurologists, members of our Society, have been able to learn, no body of specialists engaged in the study of nervous diseases has any knowledge of the reasons for the appointment of said Clark Bell, Esq., on the commission of said body, or on what representations it was obtained; therefore, be it

Resolved, That the Corresponding Secretary of the Society of Medical Jurisprudence and State Medicine, be instructed to forward the following, as well as the preamble, to the President and Secretary of the International Congress of Psychiatry and Neurology, as well as the physicians of the Commission empowered to prepare a classification of mental diseases.

Resolved, That the Society of Medical Jurisprudence and State Medicine expresses its surprise that the first time the important subject of the Classification of Insanity becomes the subject of international consideration, a subject which, however, interesting to both lawyers and physicians, is pre eminently and exclusively a question of medical science, it should have been seen fit to entrust the representation of the entire North America to one who is not a qualified practitioner of medicine; and

Resolved, That the International Congress of Psychiatry and Neuro-Pathology at Antwerp, be respectfully requested to duly weigh the considerations above advanced; inasmuch, as if it be worth the while to have American Medicine represented in the important undertaking referred to, it is worth the while to have it represented by some one or several of those who are pre-eminent as original contributors to that science in whose annals the names of Benjamin Rush, Luther Bell, Isaac Ray, Pliny Earle, and W. W. Godding, are almost household words.

Resolved, That the International Congress of Psychiatry and Neuro-Pathology at Antwerp, be respectfully referred to the American Neurological Association, the New England Medico-Psychological Society, and similar bodies whose history and membership may be referred to with just pride by American physicians as bodies which might be safely depended upon to select worthy representatives in the important undertaking of classifying disorders which are pre-eminently the study of medical men.

FRANK H. HAMILTON, A.M., M.D., L.L.D.,
President of the Society of Medical Jurisprudence and State Medicine.

WM. M. MCLAURY, M.D.,
President of the Board of Trustees of the Society of Medical Jurisprudence and State Medicine.

GEORGE W. WELLS, M.D.,
Recording Secretary of the Society of Medical Jurisprudence and State Medicine.

JEAN F. CHAUVEAU, M.D.,
Corresponding Secretary of the Society of Medical Jurisprudence and State Medicine

INDIANA STATE MEDICAL SOCIETY.—At the recent annual meeting of this Society, the following officers were elected for the ensuing year:

President, G. W. H. Kemper, M.D., of Muncie.
Vice-President, W. V. Wiles, M.D., Spencer.
Secretary, E. S. Elder, M.D., Indianapolis.
Assistant Secretary, J. McLean Moulder, M.D., Kokomo.
Treasurer, C. B. Higgins, M.D., Peru.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 19, 1886, TO JUNE 25, 1886.

Col. Glover Perin, Asst. Surgeon-General U. S. Army, granted leave of absence for one month, with permission to apply for one month's extension. (S. O. 54, Dept. Dak., June 14, 1886.)

Major John Brooke, Surgeon, ordered for duty as Post Surgeon, Ft. McHenry, Baltimore, Md. (S. O. 67, Div. Atlantic, June 23, 1886.)

Major Calvin DeWitt, Surgeon, ordered for duty in Dept. Dakota. (S. O. 142, A. G. O., June 21, 1886.)

Capt. Jno. de B. W. Gardiner, Asst. Surgeon, ordered for duty as Post Surgeon, Newport Bks., Newport, Ky. (S. O. 67, Div. Atlantic, June 23, 1886.)

Capt. Robert J. Gibson, Asst. Surgeon, granted leave of absence for thirty-five days. (S. O. 43, Div. Pacific, June 14, 1886.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING JUNE 26, 1886.

Beardsley, Grove S., Medical Inspector, detached from the Navy Yard, Norfolk, and ordered to the "Brooklyn."

Bright, G. A., Surgeon, detached from "Brooklyn" and ordered to Navy Yard, Norfolk.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDED JUNE 26, 1886.

Sawtelle, H. W., Surgeon, to proceed to Wilmington, Cal., on special duty. June 22, 1886.

Wheeler, W. A., P. A. Surgeon, granted leave of absence for thirty days. June 23, 1886.

Williams, L. L., Asst. Surgeon, to proceed to Buffalo, N. Y., for temporary duty. June 24, 1886.

Norman, Seaton, Asst. Surgeon, to proceed to Cleveland, Ohio, for temporary duty. June 26, 1886.

CORRIGENDUM.

DILATATION IN UTERINE FLEXIONS.—In THE JOURNAL of June 26, p. 971, first column, Dr. H. T. Byford is reported as saying: "I congratulate Dr. Jackson that he has discarded incision and dilatation in treating flexions." Dr. Byford writes us: "The word *dilatation* should read *discision*. I believe in dilatation, and think it one of our most valuable resources for flexure and induration in the neighborhood of the internal os."